

LIFELONG LEARNING, INTERGENERATIONAL LEARNING, AND SOCIAL CAPITAL

From theory to practice

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Abstract

The purpose of this study is to examine the relationship between lifelong learning, intergenerational learning and social capital by reporting on an analysis of the concepts and an investigation of one instance of intergenerational interaction, namely “the granddad programme” – an intervention project run by a limited number of schools in the Stockholm area. The theoretical background concerns both the lifelong perspective and the lifewide perspective of learning across the lifespan. The lifewide perspective includes both formal and informal learning. Social capital is also explored, in order to establish the extent to which this concept is compatible with the conceptual framework outlined in this study.

First a structural model is developed in order to elucidate the conceptual framework and its relationship to classroom practice. Indicators for measuring social capital are then constructed on the basis of questionnaire data. Responses from a total of 580 pupils, 19 granddads and 27 teachers in 17 schools were collected, after which Structural Equation Modelling (SEM), using the statistical software LISREL, was applied in order to test the model. With regard to the granddads themselves, an additional qualitative analysis was also carried out on a set of narrative data, regarding their perceptions and experiences of their work in the schools.

The results indicate that the granddads’ work itself is forming part of the social capital between individual granddads and the pupils. The pupil responses indicate that boys and girls consider that they enjoy similar opportunities in school, that they feel equally secure in school and that the granddad assists everyone. The results support the claim concerning increased social capital for the pupils, although there are differences between boys and girls with regard to the relative significance of the various entities of social capital. The responses from the granddads, indicate that they find their work demanding, but nonetheless rewarding because of the social network that it has established for them with the staff and pupils and the positive response from the pupils. This indicates an increase in social capital for the granddads themselves in the school context. These results support the theoretical model because interaction that occurs in the classrooms in schools where there is granddad intervention provides opportunities for both formal and informal learning and for increased social capital to be generated on the part of both the younger and the older generation.

Descriptors: Lifelong learning, intergenerational learning, social capital, granddad intervention, transmission of skills, attitudes, values and norms, Stockholm

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Chapter 1

Purpose of the Study

1.1 The Problem in context

In the mid 1960s, Hutchins (1968) attempted to foresee the future with regard to education. He proposed that education would develop into a “learning society,” which would depend on, and require, both rapid change and more free time available to individuals. Hutchins (1968) compared this future situation for individuals with that of citizens in ancient Athens, where education, considered to be the aim of society, was conducted in order to form the minds and characters of people during their leisure time. This extensive leisure time was made possible because of the existence of slaves who were in the service of the citizens. In fact, the term “school” is derived from the Ancient Greek word for slavery according to Hutchins (1968). Hutchins proposed that, in the future, machines would play a similar role for people in industrialized countries as the slaves had once done for the citizens of Athens.

Many changes took place during the last decades of the twentieth century. There was a considerable expansion in the exchange, distribution and consumption of goods and services. The IT-revolution increasingly provided access to all kinds of information, women gained greater access to the labour market and family and household patterns changed.

As a result, in our twenty-first century, the family unit in industrialized countries, such as Sweden and the United States, is most often restricted to two generations living under the same roof or even in the same community. There has also emerged the phenomenon of increasing numbers of “broken homes” and, consequently, a much greater proportion of one-parent families are to be found (Husén 1992).

Further, demographic studies indicate that the population structure in Japan in the 1960s was such that 9.1% of the population was over 65 years of age, compared to 16.7% in the year 2000 and that this figure is expected to increase to 22% by 2010 (Statistical Bureau of Japan, 2001). In the case of Sweden, in the 1960s, 11.2% of the population were over 65 years of age, while the figure for the year 2000 is 17,3%, which is expected to increase to 19.2% by 2010 (Statistics Sweden, 2001). Similar aging

population structures have also arisen in Germany, in the United Kingdom and the United States. Not only is this population structure to be found in many industrialized countries, there has also emerged the related phenomenon of a widening generation gap, between older and younger members of the population, with the associated problem that there are fewer opportunities for them to interact, or to even meet at all.

This, when combined with “poor” social capital in society at large (Woolcock, 1999) and with a low representation of male teachers, compared with female teachers, has evolved into a situation where increasing numbers of young people grow up without adult male role models. Lifelong learning, in the form of intergenerational learning, may offer one possibility for finding solutions to these problems. The intergenerational programme that is the subject of the research reported in this study is known as “the granddad programme”. “Granddads” work in a number of schools in Sweden in order to help create a better social environment for pupils attending compulsory education. Those eligible for this kind of work have either reached retirement age or have been unemployed for a lengthy period of time. The theoretical background for this research study concerns both the lifelong perspective and the lifewide perspective of learning across the lifespan. The lifewide perspective relates to both formal and informal learning. Social capital is also explored, in order to establish the extent to which, in practice, it is included in, or excluded from, the intergenerational programme and the degree to which it might be compatible with the conceptual framework outlined in this study.

Theoretical background

Although used earlier by Aser Deleon (1963), Torsten Husén (1968), Cyril Houle (1974), and Ryszard Wroczynski (1974), one of the first researchers to envision and develop encompassing models of lifelong learning and lifewide learning was Arthur Cropley (1976; 1980). In the two studies cited, Cropley conceptualised and developed lifelong education in more detail, casting the term in the form of three important principles. The first of these is that lifelong learning refers to learning across the entire lifespan, from birth to death. The second principle is that the lifewide perspective refers to learning that takes place both in the form of formal education and in the form of other activities, non-organized and unsystematic, undertaken in various settings. The third principle is the statement that these first two principles are put into practice by individual people, and “ ... will thus

depend upon their possession of the personal characteristics necessary for the process” (Cropley, 1980, p.5).

In more recent research, as reported by Aspin and Chapman (2001), lifelong learning is treated as a triadic concept, with three factors: economic progress and development, personal development and fulfilment, and social inclusiveness, democratic understanding and activity.

These different factors in lifelong learning, whether in the form of formal or informal education, are largely operative in those settings where relationships with other people, organisations or communities, are paramount. It is in this context that the concept of social capital links up with Cropley’s (1980) third principle of lifelong learning, the importance of individuals possessing those personal characteristics necessary to the process of lifelong learning in practice. Further, with regard to the triadic concept proposed by Aspin and Chapman (2001), the first factor can be interpreted as representing the human capital perspective, the second both the social capital perspective and the human capital perspectives, whereas the third factor can be interpreted as being indicative of the social capital perspective with regard to the concept of lifelong learning.

According to Coleman (1988; 1990), social capital is not to be regarded as a single entity. The most important elements of the concept of social capital are trust, communications and norms and structure. These features can be found simultaneously in any context where individuals are working towards a common goal, one that is recognized as worthy and worthwhile by the group as a whole. Hence social capital may be nurtured and developed through co-operation between individuals. Further, social capital is found both at micro levels, in the form of personal relationships between people and, in democratic societies, at macro levels (Putnam, 1993).

Intergenerational learning is an integral part of lifelong learning. In the literature on intergenerational interventions, the concept of intergenerational transmission has been defined in a number of different ways. One such definition (Newman, 1997) targets specific programmes, namely intergenerational programmes. Another definition is derived from explorations of all intended intergenerational transmissions (Kaplan, 1998).

The role of senior citizens in intergenerational programmes in schools takes many forms. In Japan they function as educators, as conveyors of culture or as companions for pupils (Kaplan, 1998). According to Newman (1997), the senior citizens in the intergenerational programmes in schools in the United States function as mentors, tutors, caregivers or nurturers, mature friends or coaches. Both Kaplan (1998) and

Newman (1997) stress that there is a two-way transmission of learning, from adults to pupils and from pupils to adults.

The granddad project in Swedish compulsory schools is an example of how intergenerational lifelong learning can be implemented in reality. As this programme entails both a lifelong and a lifewide perspective, there is an opportunity to discover how, in practice, social capital can be included or excluded in the implementation of the programme and the extent to which the concept of social capital is compatible within the conceptual framework developed in the present study. Given that social capital consists of trust, communication and norms and structure, the aim is to establish appropriate indicators for these features of social capital in the granddad programme.

It is important to note that the Swedish granddad programme is a limited project that involves a relatively small number of experiments conducted in schools in the Stockholm area. These experiments are designed in part to increase exposure and contacts between pupils and men other than their teachers.

1.2 Purpose and objectives

The present study is concerned with lifelong learning, intergenerational learning and social capital. The main proposition is that there exists a relationship between these concepts. The purpose of this study is to examine this proposition through investigations in compulsory schools in the greater Stockholm area. The first question posed is whether there has been a gain in social capital on the part of the pupils as a result of the granddad intervention. The second question to be studied is whether there have been any opportunities for increasing social capital for the granddads themselves. The third question is whether teachers' social capital has been increased as an outcome of the granddad programme.

- The first objective is to provide an analysis of the concepts of lifelong learning and intergenerational learning, and social capital, and their history, on the basis of various national and international research and policy documents, with a view to establishing whether it is possible to establish any common framework.
- The second objective is to study lifelong learning implemented in practice. The intention is to explore, establish, and develop appropriate

indicators as measures of social capital and investigate the extent, if any, of the importance of social capital to the implementation of lifelong learning.

- The third objective is to build a structural and a measurement model, and fit it to collected data in order to examine the correspondence between the proposed theoretical framework and the practical reality observed in the Swedish classrooms investigated.

1.3 Significance of the Study

The significance of the present study is in the contribution made to knowledge gained from research regarding the relationship between social capital and lifelong learning, and also understanding of how these concepts relate to theory and practice.

In addition, it is hoped that this study will also offer a contribution to increased clarification of the conceptualisation of lifelong learning, intergenerational learning, social capital and the relationships between these concepts, that the links between theory and practice regarding these three concepts will eventually be more clearly envisaged and described, particularly with regard to the more widespread application of the concept of social capital to education.

One important factor, with regard to future learning in international and national contexts, concerns the ongoing changes in the demography of many countries, such as ageing populations. Those in the older generation who remain active and wish to participate, in some way, in the community, are still able to contribute to improvements in the quality of life, not only for themselves, but also for the community as a whole. Thus the present study offers a contribution to policy formation through:

- describing the needs of school-age children and their relationships to adults, especially senior citizens;
- exploring the needs of senior citizens with regard to opportunities for establishing job relationships and social networks;
- clarifying the needs of teachers in regard to the provision of opportunities for co-operative activities with another adult in the social context of school learning.

1.4 Limitations of the Study

Intergenerational learning is a relatively recent concept and, as yet, only a limited amount of research, with regard either to theory or to practice, or to both, has been carried out. Consequently, the scope for either theoretical or practical research is therefore limited. These circumstances have naturally had a bearing on the design and the results obtained in the present study. A further limiting factor is that the study has had to be confined to a population in the greater Stockholm area because this is where the granddads, the subject of the investigation, are working. In addition, when considering the results reported here, it should also be remembered that the policy and process of decentralization implemented throughout the whole of the school system in Sweden since 1991, has brought about a situation in which there is less standardisation to be found with regard to the definition of concepts such as school class and marks and, consequently, classification difficulties often arise when comparisons are being made across schools. It should also be acknowledged that this study was designed to examine the pupil population as a whole, but as the analysis progressed the difference between the boy and girl populations made it necessary to split the data set into two. Further, although all actors in the classroom setting (i.e., pupils, teachers and granddads) had input into the study, the focus has been on intergenerational transmission of skills, attitudes, norms and values. Consequently, the emphasis has been on pupils and granddads more than teachers or learning.

1.5 Organisation of the study

This study is divided into five main parts

Part I (Chapters 1-2) presents the research problem and the conceptual framework.

Part II (Chapters 3-4) reviews the concepts of lifelong learning and social capital.

Part III (Chapters 5-6) describes the structural model, research design and data collection.

Part IV (Chapters 7-9) presents the data analysis. Chapter 7 focuses on descriptive data analysis, Chapter 8 presents a multivariate data analysis and Chapter 9 deals with a qualitative analysis of the granddad experience.

Part V (Chapter 10) presents a summary of the main results of the study and a discussion of the conclusions that can be drawn from it.

Chapter 2

Conceptual Framework

2.1 Introduction

The term, lifelong education, was introduced towards the end of the 1960s, as a new concept that was considered to be specifically concerned with change and reconstruction in education¹. The introduction of the concept came about in order to give expression to education in a wider and deeper meaning. The first major investigation and analysis of this new concept of lifelong education, was undertaken by the UNESCO Institute of Education (UIE), based in Hamburg. Ten researchers participated in an international study (Dave, 1976) aimed at specifying a theory of lifelong education. Four of the ten participants were already qualified and recognized authorities in the field of lifelong education, whereas the other six represented other disciplines. These four consisted of Dino Carelli, Director of the UIE, Ravindra Dave, editor of the study, Ettore Gelpi, expert on lifelong education at UNESCO and Paul Lengrand, representing lifelong education in France. Included in the second group were Arthur Cropley, from Australia, representing research in psychology, anthropologist and ecologist Colin De'Ath, from Canada, sociologist Henri Janne, from Belgium, historian Prem Kirpal, from India, Bogdan Suchodolski, from Poland, representing research in philosophy and, finally, economist Annie Vinokur, from France. This team of specialists met on six different occasions, between the autumn of 1973 and the spring of 1975. The essential point in bringing specialists together from a variety of disciplines, countries and cultures was to enable as broad a perspective as possible to be obtained over the whole domain of lifelong education. Further, the study was also expected to cover both conceptual and operational arenas.

In the report from this study, the background to this research was stated to be the “ ... staggering developments” that “ ... generate a persistent demand for continuing the process of renewal of knowledge, skills and values through out life” (Dave, 1976, p.16). The specialists who were participating in this research were directed to use their own

¹ Parts of this chapter have been published in the *International Journal of Lifelong Education*, Vol. 21, 510-524.

ideological approach, together with the macro level or micro level of their own choosing, when developing their particular view of the concept of lifelong learning. Further, they were likewise to place the concept of lifelong learning in the context of either industrial countries or rural countries, according to their own wishes. The study was thus designed both to be interdisciplinary and to encompass a variety of different arenas. The participants themselves were well aware of the difficulties involved in attempting to establish, on the basis of available knowledge and in a multidisciplinary context, any kind of theoretical foundation for the concept of lifelong education. Nonetheless, the definition of the concept that eventually emerged from the study is as follows:

“Lifelong education is a process of accomplishing personal, social and professional development throughout the life-span of individuals in order to enhance the quality of life of both individuals and their collectives. It is a comprehensive and unifying idea which includes formal, nonformal and informal learning for acquiring and enhancing enlightenment so as to attain the fullest possible development in different stages and domains of life. It is connected with both individual growth and social progress. That is why ideas such as “learning to be” and “a learning society” or “an educative society” are associated with this concept.” (*ibid.*, p.35)

The participants wished to make it very clear that they considered the concept of lifelong education to be of considerable importance, although, different operational modalities would, nonetheless, probably have to be adopted with regard to its application in the various contexts in different countries. In addition, to allow individuals, in any particular country, the opportunities to obtain improvements in the quality of their lives, the concept of lifelong education would also have to be adapted in accordance with different socio-economic, cultural and both intra-educational and extra-educational variables within that country.

2.2 Lifelong and lifewide education

The classification of education in terms of the concepts of formal, nonformal and informal, was subsequently introduced in order to provide lifelong education with a broader, lifewide perspective. These concepts for the classification of education were defined by Coombs and Ahmed (1974), in a study carried out under the auspices of the International Council for Educational Development (ICED) and initiated and sponsored by the

World Bank. The study by Coombs and Ahmed (1974) was largely confined to adults, however they also included another study, also carried out under the auspices of ICED, that concentrated on children and youth. At the outset of these studies, Coombs and Ahmed (1974) first made a careful analysis of the nature of the learners and their requirements, before proceeding with an investigation of the possible means by which these requirements might be met. In this initial analysis, it was determined that it was no longer possible for the definition of education as a whole to be confined to limited periods of time or to particular institutions or locations such as schools, nor for it to be restricted to a perspective where its measurement was to be merely in terms of the number of years an individual had been exposed to it. Consequently, Coombs and Ahmed (1974) argued that education be instead considered as occurring throughout the life cycle of each individual, “ ... from earliest infancy to adulthood and involving a great variety of methods and sources” (*ibid.*, p.8). They determined it, therefore, to be desirable to distinguish between three different modes of education, as follows:

Formal education: “the highly institutionalised, chronologically graded and hierarchically structured “education system”, spanning lower primary school and the upper reaches of the university.” (*ibid.*, p.8)

Nonformal education: “any organized, systematic, educational activity carried on outside the formal system to provide selected types of learning to particular subgroups in the population, adults as well as children.” (*ibid.*, p.8)

Informal education: “the lifelong process by which every person acquires and accumulates knowledge, skills, attitudes and insights from daily experiences and exposure to the environment – at home, at work, at play; from the example and the attitudes of the family and friends; from travel, reading newspapers and books or by listening to the radio or viewing films or television.” (*ibid.*, p.8)

In the view of Coombs and Ahmed (1974), formal education is thus structured in a system of “intellectual” parts (*ibid.*, p.233), while nonformal education is comprised of a variety of educational activities that are not usually interconnected in any systematic way. However, the authors point out that there are no definitive or clear-cut boundaries between these three modes of education and, consequently, both overlapping and interaction may occur. In addition, they identified a number of similarities between formal education and nonformal education, whereby both:

“ ... have been organized to augment and improve upon the informal learning process – in other words, to promote and facilitate certain valued types of learning (such as reading and writing) that individuals cannot as readily or quickly acquire through ordinary exposure to their environment.” (*ibid.*, p.8)

Subsequently, Coombs and Ahmed (1974) describe nonformal education and formal education as having similar pedagogical forms or methods, whereas they usually differ with respect to sponsorship and also in terms of the manner in which they are arranged, together with the objectives towards which they aim, both of the latter being determined on the basis of the nature of the groups they are to serve. It is necessary, conclude Coombs and Ahmed (1974), for elements from formal, nonformal and informal education to be synthesized and strong links to be developed between them, in order for systems of lifelong education to evolve.

The two perspectives, lifelong education and lifewide education, are also taken up by Dave (1976), as follows:

“ ... the field should embrace the vertical time dimension from birth to death, and the horizontal space dimension including education in the home, school, community, places of work, culture and recreation, religious institutions and through massmedia and other structures of formal, nonformal and informal learning.../...it has in fact been possible to cover quite a good area within the vertical and horizontal dimension of the total life-cycle.” (*ibid.*, p.31)

2.3 Lifelong and lifewide learning

Distinctions between formal, nonformal and informal education are useful when elaborating on a “lifewide” perspective of lifelong education. Rao, as early as 1970, had described both informal elements and formal elements in education, where the possibility was discussed of “informalizing” the formal system, by introducing informal elements into formal education or, in other words, to “ ... provide linkages between education of terminal character and education which continues throughout life” (Rao, 1979, p.50). In an address delivered before a conference held under the auspices of the International Schools Association, at the United Nations in New York in 1970, Malcolm Adieshiah (1973) pointed out that lifelong education encompassed both a vertical continuum and a horizontal continuum.

The definitions of formal, nonformal and informal education, cited above, can thus be used as a foundation for defining the horizontal axis of lifelong education. The horizontal, or lifewide, perspective has been previously described and utilized by others. For example, Hawes (1975) maintains that

” ... lifelong education seeks continuity and articulation along the vertical or longitudinal dimension ...lifelong education also seeks integration at its horizontal and depth dimension at every stage of life.” (*ibid.*, p.71)

Some of the concepts that are characteristic of lifelong education have been defined by Dave (1976). Emphasis was placed here on the importance of formal, nonformal and informal education together with the importance of both a vertical, or longitudinal, dimension and a horizontal dimension (*ibid.*, 1976). Skager and Dave (1977) utilized both horizontal and vertical integration with regard to curriculum evaluation in lifelong education. They also developed practical implementation specifications in a comparative study of Japan, Rumania, and Sweden. Skager (1978) also used the concepts of formal, nonformal and informal education in a study of learning.

Eventually, towards the end of the 1970s, a model of lifelong and lifewide education was proposed. To be more precise, this occurred in 1978, when a number of specialists were brought together under the auspices of the UIE, with the aim of preparing a theoretical outline for lifelong education. These specialists had been drawn from a number of different arenas: socio-political, legislative, financial, organisational, planning and administrative. The subsequent outcome of their deliberations was the book, *Towards a System of Lifelong Education*, edited by Cropley (1980).

The transition of the theoretical concept from lifelong education to lifelong learning was now a fact. In his overview of the book as a whole, Cropley stated: ”Lifelong learning existed before the emergence of current interest in it and would continue to occur even if educators ignored it” (*ibid.*, p.1). It is specifically stated here by Cropley (1980) that lifelong learning does not only take place in formal education but also entails a lifewide perspective, where he ” ... emphasises the contribution to learning of people who are not trained, paid or acknowledged as teachers” (*ibid.*, p.5). The definition of *learning* proposed here by Cropley is that it is ” ... a process of change occurring within people as a result of experience” (*ibid.*, p.3), while his definition of *education* is that it ” ... involves the influences

which guide or encourage learning” (*ibid.*, p.3). Therefore, Cropley concludes, changes in education have a direct effect on lifelong learning.

In the book cited above, Cropley (1980) provides two models for lifelong and lifewide learning, one of which is the micro perspective and the other the macro perspective, as shown in Figure 2.1. A lifelong perspective, from birth to death, is envisioned, in a macro perspective, as a box, which includes the total spectrum of educational influences. In this model, the relative short period of formal schooling is included as a smaller box, contained within the larger box representing the lifelong perspective as a whole. The vertices of the model indicate the extent to which educational influences are institutionalised, where the left-hand side of the box represents the least institutionalised educational influences, while the right-hand side represents the most institutionalised, including schooling. School, in this perspective, is considered to be institutionalised, beginning at about 5 years of age and being completed somewhere between the ages of 10 and 25 years of age, depending on the particular society in which the pupil is living. Thus the least institutionalised educational influences, according to Cropley’s model, are equivalent to informal education, as described by Coombs and Ahmed (1974) while, conversely, the most institutionalised educational influences are equivalent to formal education.

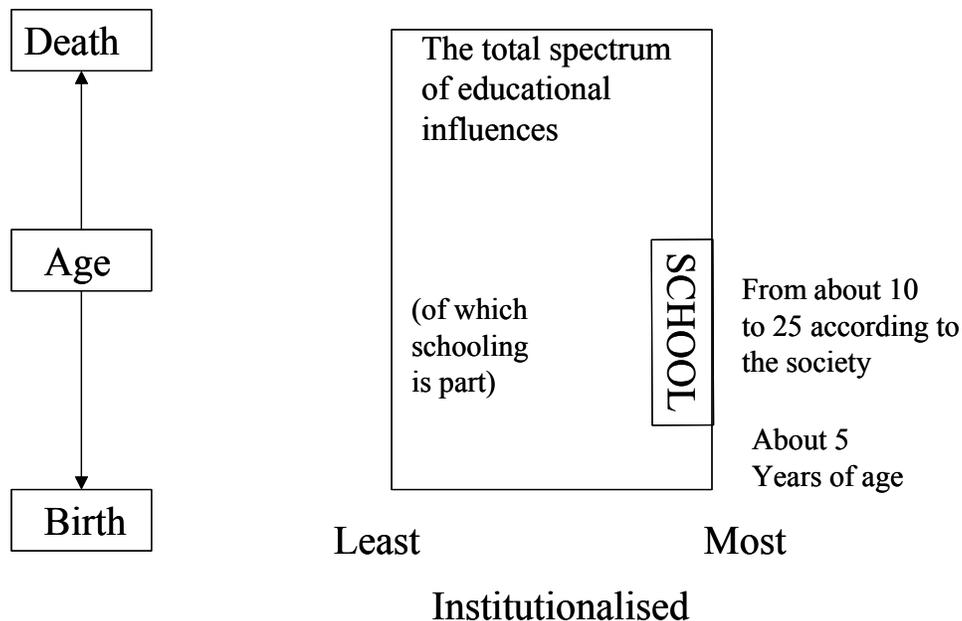


Figure 2.1 Schooling in relation to educative influences
Adapted from: Cropley (1980, p.6)

The micro perspective, on the other hand, indicates the manner in which any individual is exposed to educational influences. In addition to the macro level model of schooling, Cropley (1980) also discussed the extent to which institutionalisation is self-contained and the extent to which the boundaries between different parts of the model can be modified or transgressed. To illustrate this, Cropley (1980) presented a micro level model in order to display various educational influences on the individual (see Figure 2.2). The left-hand side of this model (A) represents the less institutionalised aspects of life and the right-hand side (B), the more institutionalised aspects of life, where it is predicted that there is some common area where the two overlap. This prediction is conceptualised as the hatched section in the middle area of the model. Area A is defined as being affected by socio-political and economic factors, such as the level of organization of labour in the society concerned and the different types of educational experiences to which an individual has been exposed in the course of daily life. In the view of Cropley (1980), lifelong education would require greater openness with regard to area B, the more institutionalised aspects of life.

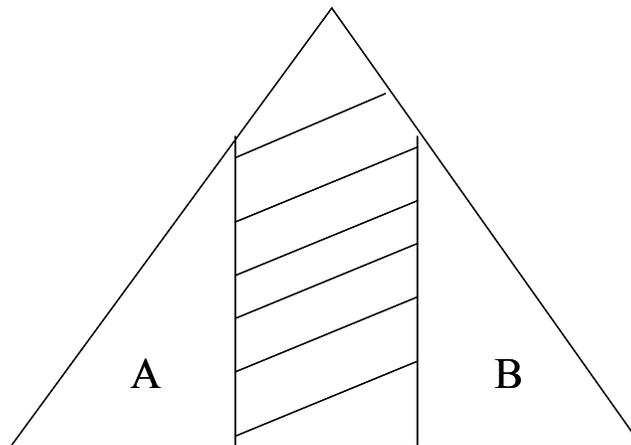


Figure 2.2 Educative influences on the individual
Adapted from: Cropley (1980, p.10)

2.4 Recent theories

In more recent literature, it is to a greater degree usual to find the terms formal and informal education, and learning, being adopted, rather than the concept of less and more institutionalised aspects of life. The perspectives

of lifelong and lifewide learning, first proposed by Cropley (1980, p.6), have recently been further articulated by a number of different authors and organisations (Tuijnman, 1999; Skolverket (Swedish National Agency for Education), 2000; Hager, 2001; Medel-Anonveva *et al.*, 2001; Aspin and Chapman, 2001; OECD, 2001a; Tuijnman and Boström, 2002). Thus a model of lifelong learning is to be found, for example, in the framework proposed by the Swedish National Agency for Education (2000, p.19). In this model, the informal perspective and the formal perspective have changed sides, with the central, hatched area found in Figure 2.2. being termed nonformal learning. It is this model which is adopted here (see Fig. 2.3).

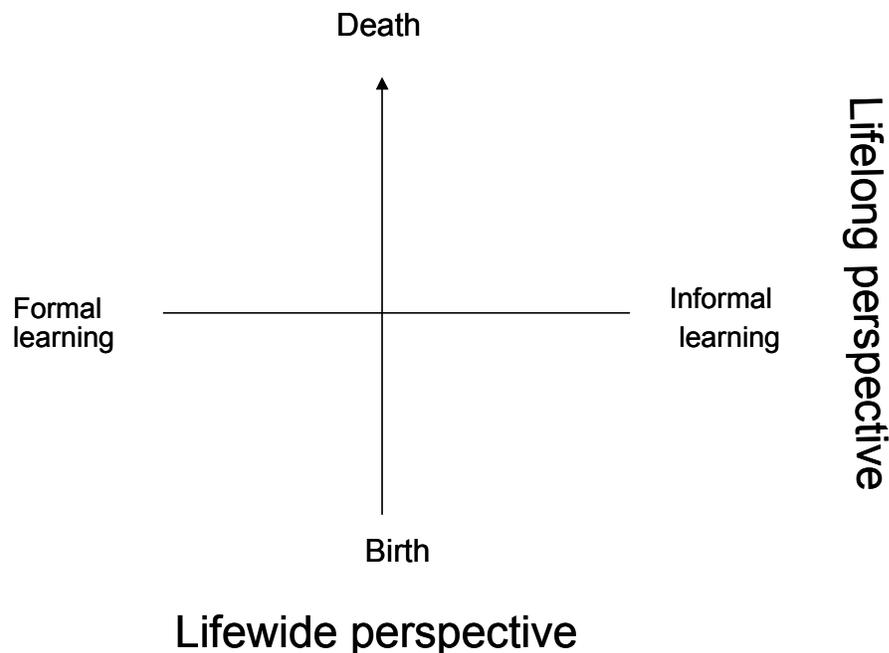


Figure 2.3 Lifelong and lifewide learning
Adapted from: Swedish National Agency for Education (2000, p.19)

2.5 Intergenerational learning, the concept and the framework

In studies concerned with intergenerational intervention, the concept of intergenerational transmission has been defined in a number of different ways. Thus, Newman (1997) propose the use of specific *programmes*,

known as intergenerational programmes, where “the intergenerational concept is embodied in programs that involve planned ongoing interactions between non-biologically linked children, youth and older adults. Such programs engage these groups in activities that benefit both the young and the old” (*ibid.*, 1997, p.4).

A different view is proposed by Kaplan (1998), who is concerned with intergenerational transmission in Japan, where the focus of the research is on all intergenerational *initiatives*, where intergenerational initiatives are defined as those “activities, events and ongoing programs designed to increase cooperation, interaction or exchange between people between sixty years of age and older and twenty years of age and younger” (*ibid.*, 1998, p.2). Here, intergenerational initiatives include all programmes, irrespective of whether they are funded or not funded, or whether they are implemented on a periodical, a one-off or a seasonal basis.

In April 1999, the UNESCO Institute of Education (UIE) organized a meeting in Dortmund with the aim of attempting to reach a common view of the concept of intergenerational learning. This meeting resulted in a monograph in which a variety of case studies on intergenerational programmes in the participating countries were described and analysed. Eventually, the researchers concerned, from China, Cuba, Germany, Japan, the Netherlands, Palestine, South Africa, Sweden, the United Kingdom and the United States were able to agree on a common definition of the concept involved. However, since these participants were from a range of different cultural and socio-political backgrounds, it was a broad definition that was agreed upon; the intention being that the concept should accommodate a variety of perspectives and facilitate collaboration. The definition agreed upon is as follows:

“Intergenerational programmes are vehicles for the purposeful and ongoing exchange of resources and learning among older and younger generations.”
(Boström, Hutton-Yeo, Ohsako and Sawano, 2000, p.3)

An inventory of intergenerational programmes in Sweden (Boström *et.al.*, 2000; Boström, 2000a) indicates that a variety of different projects are to be found. One intergenerational programme, although a small project, allows for a practical example for explaining the theoretical concept. This project, developed in the bottom-up fashion in the greater Stockholm area, is the “granddad programme” where male senior citizens, known as “granddads,” are employed in schools on a voluntary basis. They do not take over any of the normal duties or responsibilities of teachers or of any other staff in the school. When any senior citizens apply to work as

granddads in this programme, they must fulfil two criteria. First, they must be fond of children and, second, they must be able to perceive the needs of the pupils and be able to relate to the pupils in a positive manner. An appropriate model of lifelong and lifewide learning (as in Fig. 2.3, above) may be applied to the arena for intergenerational learning in Sweden which the granddad programme represents. In this model, the vertical axis represents a complete life span which, looked at from the bottom up, provides a theoretical description of an individual life cycle, from birth to death. The horizontal axis represents experiences of lifewide learning, where formal learning is located towards the left side, nonformal learning is located along the central section of the axis and informal learning is located towards the right side. For the granddad programme, the pupil in formal education is located in the bottom-left quadrant, and the male senior citizen (granddad), representing informal learning, will logically be located therefore in the upper-right quadrant. Further, a shaded cone is superimposed onto the model to represent the transmission of learning that takes place between the granddad and the pupil, and vice versa. This application of the general model (Fig. 2.3) to the particular case of the arena for intergenerational learning in Sweden, as it has become established through the introduction of the granddad programme, is represented in Figure 2.4.

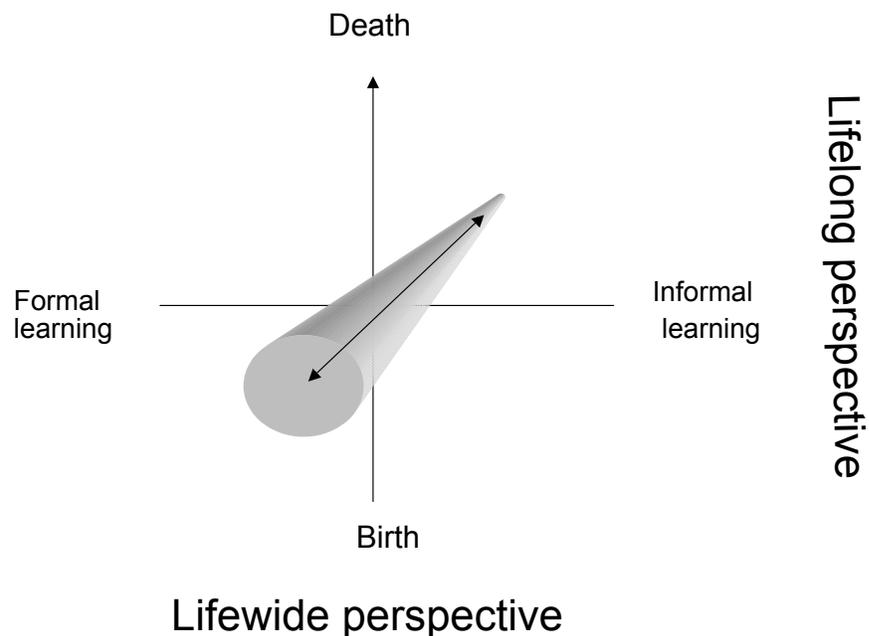


Figure 2.4 Lifelong learning and intergenerational learning (Boström, 2002)

This particular model (Figure. 2.4) provides a framework for describing how intergenerational learning may be seen in relation to lifelong learning, in a lifewide perspective. The pupils undergoing formal education in schools meet male senior citizens, as role models and friends, where a dialectic transmission of learning occurs between them. The senior citizens are not professionally engaged in formal education, rather they are engaged in informal education, as many of the activities with which they are concerned in the schools are of a social character, where they are providing care for the pupils but not teaching them in any direct manner.

2.6 Social capital, the concept

Coleman, in his book, *Resources for Social Change* (1971), was one of the earliest researchers to use the concept of social capital. In this work, Coleman discussed the convertibility of one type of asset, for example, economic capital, into other types of assets, such as social capital, for social capital to be converted, in turn, into human capital. Coleman declares:

“In short it appears that the provision of any community asset requires two elements: some set of individual resources that can be shared and the cohesion, institutions, and systems of trust that allow these resources to serve the whole community.” (*ibid.*, p.41)

Later, when developing his theory further, Coleman (1990) referred to another use of the concept of social capital, namely, social capital as defined as that set of resources found to inhere in family relationships and in community social organisation, where such resources are considered useful for the cognitive or social development of a child or an adolescent. These resources vary from individual to individual and may constitute an important advantage for children and adolescents in the development of their own human capital. Coleman (1988; 1990), in a further development of the concept of social capital, subsequently defined it as follows:

“Social capital is defined by its function. It is not a single entity but a variety of different entities, with two elements in common: they all consist of some aspect of social structures, they facilitate certain aspect of social structures and they facilitate certain actions of actors – whether persons or corporate actors – within the structure.” (Coleman, 1988, p.98)

According to Coleman (1988), there are three forms of social capital, as follows:

- Social capital as the level of trust to be found in the social environment and the actual extent of recognized obligations.
- Social capital as information channels.
- Social capital constituting those norms and sanctions that encourage or constrain people to work for a common good, thereby relinquishing their own immediate self-interest.

2.7 The inclusion of social capital as a continuum of norms

Fukuyama (2000), one of a number of researchers who have utilized Coleman's definition of social capital, has chosen to concentrate on the importance of norms and structures in his particular conceptualization of social capital. For Fukuyama (2000), social capital is to be regarded as a set of informal values or norms, shared by members of a group, which permits co-operation amongst them. According to this view, where trust is seen as a by-product of shared norms of ethical behaviour, it is the presence of social norms that provides the indicator for social capital. Fukuyama (2000) proposed a model, whereby the manner in which social norms may vary along a continuum is described, such that hierarchically generated, more formal, norms are found towards one side and spontaneously generated, less formal, norms are found towards the other (as shown in Fig. 2.5).

Thus, norms that are spontaneously generated tend to be informal. They are not found in any written or published form. In contrast, hierarchically generated norms are to be found in written or published form, often as "written laws, constitutions, regulations, holy texts, or bureaucratic organisation charts" (Fukuyama, 2000 p.147). In Figure 2.5, the formal norms are located along the continuum, towards the left-hand side of the model, displayed as an arrow indicating the "more formal" direction, whereas the informal norms are located towards the right-hand side of the model, displayed as an arrow indicating the "less formal" direction.

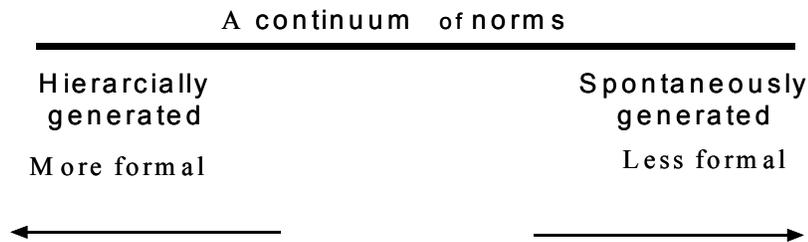


Figure 2.5 Continuum of norms
Adapted from Fukuyama (2000)

Social capital, as a theoretical entity, in the form of structure and norms, represented as social norms along a continuum, extending from formal norms to informal norms, may now be incorporated into the lifelong-lifewide model. It is in this manner that the links between social capital and lifelong learning become apparent, as indicated in Figure 2.6. They are shown as two dimensions of the lifewide perspective. The formal and informal learning perspective denotes the first of these two dimensions, while the second is denoted by the formal to informal continuum of social norms. According to Fukuyama (2000) sociology, as a discipline, is duty bound to study social norms because sociologists make the assumption that human beings, during their period of growth and maturation as individuals, also become socialized into different roles and identities. Thus Fukuyama states:

“These norms bind communities together and are tightly enforced by them, sharply limiting the kind of choices people can make about their lives.” (*ibid.*, p.147)

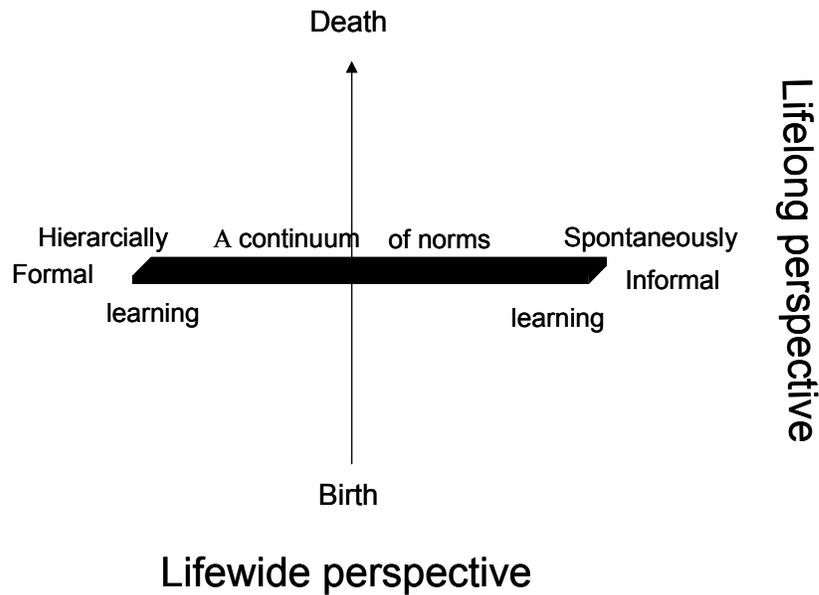


Figure 2.6 Holistic model in relation to norms and social capital (Boström, 2002)

Therefore, since the continuum with regard to social norms runs from formal to informal norms, this perspective has also now been incorporated into the lifelong-lifewide model, with the links between social capital and lifelong learning indicated in the manner described above.

2.8 Social capital and the child

When reflecting on changes in the role of women in Western societies, and the impact these have had on socialization since the 1950s, Coleman (1990) claims that much of the social capital, which children and adolescents formerly depended on, both for psychological support and for learning about norms and social boundaries, has now disappeared as women have progressively have moved out of the household, and the neighbourhood, and into the workforce. The family structures that have arisen as a result of such changes, have also altered the parent-child relationship itself.

Coleman (1990) describes three important aspects of social structure, with regard to child rearing, and stresses the importance of the existence of some sort of network or “closure of a social network” between two, or more, adults and the child. These three different types of adult-child

relationship are illustrated in Figure 2.7. The first of these demonstrates the relationship between one child and one adult where all child-rearing responsibility is borne by that one adult. In the second case, two adults in the same family share the responsibilities of child rearing. The third type is that where an adult bears responsibility for child rearing, but is able to share some of this responsibility with another adult, outside the family, such as a friend or a teacher. The new family structures found in most Western societies, referred to above, entail some form of reduction in the parent-child relationship. At the same time, an increased proportion of psychological investment in child rearing derives from actors in new structures, such as child day-care centres and schools.

- 1) The first aspect is the intensity of the relationship between adult and child.
 - 2) The second aspect is the relationship between those two adults who, in turn, have their own relationship of some intensity with the child.
 - 3) The third aspect is the continuity of structure over time.
- Coleman (1990, p.590)

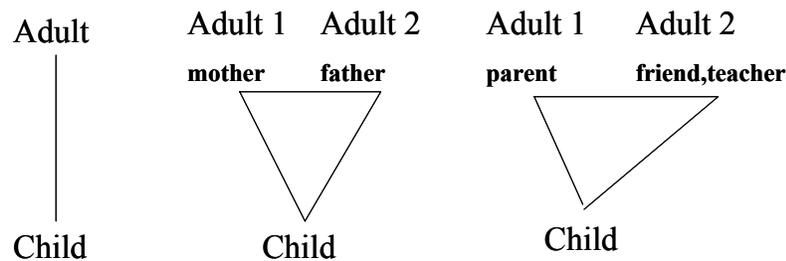


Figure 2.7 Social capital and a social network involving a child and adults
Adapted from Coleman (1990, pp.591-593)

It is possible for adults other than parents, such as teachers or granddads, to constitute a social benefit for the child. According to Coleman (1990), social capital resides in the capability of any transmission between an adult and a child. As demonstrated by Coleman (1990), a child is dependent on social and psychological support and on social constraints, which together constitute that social capital which is required of adults to invest in the young.

2.9 Conceptual model of intergenerational learning

The conceptual model shown in Figure 2.8 provides the organizing framework for describing the granddad programme as a whole, as an intergenerational intervention. The lifelong and lifewide perspectives of learning are represented as extending along two axes. The vertical axis denotes the lifelong perspective, representing the total life cycle from birth to death. The horizontal axis denotes the lifewide perspective, described as two dimensions, where one represents formal and informal learning, and the other a continuum of norms. In this conceptual model, the continuum of norms extends from hierarchically created or formal norms to spontaneously created or informal norms. Norms and structure constitute dimensions of social capital and as such are incorporated into the model. Further, in this model, as indicated in Figure 2.8, individual relationships between the child (C) and the granddad (A) are mapped out by the shaded cone (see Figure 2.7).

Social capital is created by the existence of closure in a social network involving a child and two or more adults. The cone is a model of the transmission of knowledge, skills and attitudes between the child (C), and the granddad (A), found at the apex of the cone. This particular aspect of the model indicates the intergenerational interactions that take place in both the lifelong and lifewide perspectives. The trust and communication entities of social capital may be seen as the social network that pertains between a child (C) and an adult (A) within the area represented by the cone. The network also includes a teacher (T), found in the upper left-hand quadrant, in the section representing formal learning. Thus, formal learning that takes place in the context of a school, is incorporated into the model, with the child as pupil (C) and the teacher (T) linked by the vertical dashed line as shown. The length of this dashed line between any particular pupil and a teacher will depend on the age of the pupil. Formalised norms and structures are found on the left-hand side of this vertical axis and represent, for example, the national school law and curriculum, together with those regulations that are specific to each school and each classroom. Conversely, informal norms and structures are represented, in this model, by the area on the right-hand side of the vertical axis.

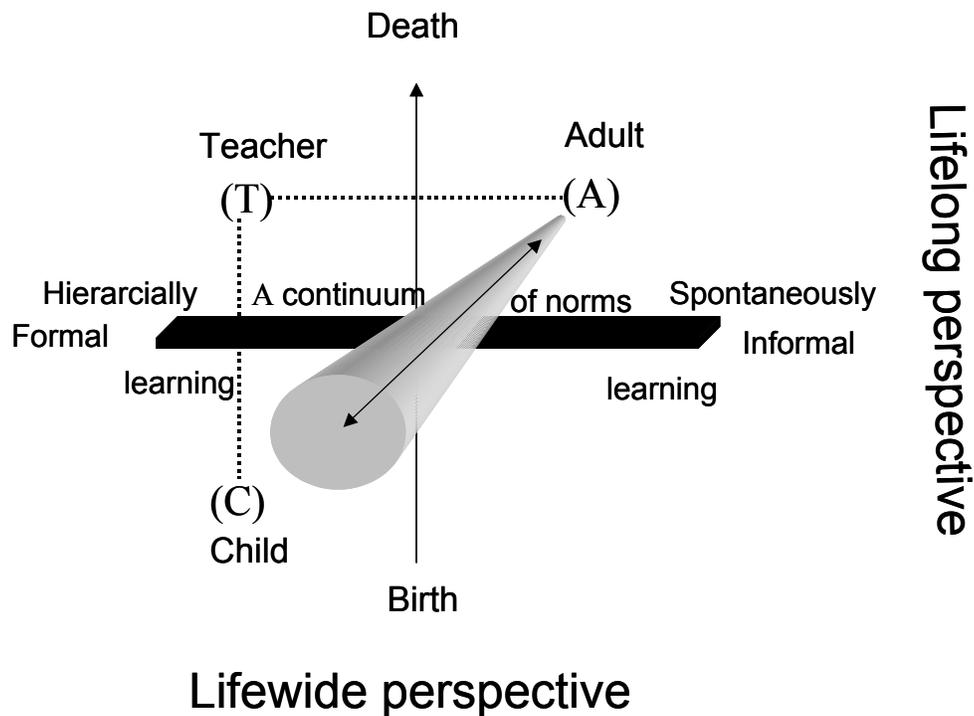


Figure 2.8. Multidimensional model of intergenerational learning (Boström, 2002)

The granddad, as an adult (A), is located in the upper right-hand quadrant of the model, firstly, because of his age, and secondly, because of the nature of his work. His place is in the area representing informal norms and structures, as he works for the social benefit of each pupil, rather than acting as a professional teacher or guardian.

There is also transmission between the teacher and the granddad with regard to the socialization of those pupils in the group with which the granddad is concerned. This pattern of interaction has been described, in Figure 2.7, as one of several different possible types of relationship between an adult and a child in the A-C-T triangle.

2.10 Summary

The theoretical components regarding social capital and lifelong learning and lifewide learning have been synthesized into this single model.

- Norms and structure constitute one dimension in social capital and as such, have been incorporated into the model.

- The individual relationships between pupils and granddads, as represented by the shaded cone, and may be compared to Coleman's interpretation of social capital in child-rearing (see Figure. 2.4, above), where social capital is seen as being derived from the existence of closure in a social network involving a child and two or more adults.
- In the model described here (see Figure. 2.8), the shaded cone represents the transmission of norms, knowledge, skills and attitudes between the child (C), as pupil, at the base of the cone, in the bottom left-hand quadrant, and the adult (A), a male senior citizen as granddad, at the apex of the cone, in the upper right-hand quadrant. This area of the model denotes the manner in which intergenerational interactions occur in both the lifelong and the lifewide perspective.
- The entities of trust and communication in social capital are represented in the model (see Fig. 2.8) by that social network which has been established between the child (C), as pupil, and adult (A), denoted by the shaded cone, together with that network, found in the formal component of learning, which has been established between the child (C), as pupil, and the teacher (T).

Thus, as presented in the model in Figure 2.8, intergenerational learning in this theoretical framework provides a foundation for lifelong learning practice in a social capital perspective.

Chapter 3

Lifelong Learning and Intergenerational Learning

3.1 Introduction

During the 1990s, a theme emerged in education concerning learning and training across the individual lifespan, which eventually became known as the concept of lifelong learning. This concept was the subject of proposals formulated by the OECD, UNESCO, the European Parliament and the EU Council of Ministers. The common idea was that everyone, at any time during their lives, should have the opportunity to participate in learning. At the 1990 OECD Educational Ministerial Meeting, this idea was subsumed under the theme, "High Quality Education and Training for All" (OECD, 1992). Subsequently, at a conference of OECD ministers of education held in January 1996, the idea was explicitly referred to in the heading, "Making Lifelong Learning a Reality for All" (OECD, 1996). Also in that year, a Commission appointed by UNESCO held a conference on "Education in the Twenty-First Century" and the subsequent report was entitled "Learning: The Treasure Within" (UNESCO, 1996), where the importance of lifelong learning was emphasized. Finally, the European Commission designated that very same year, 1996, as "The European Year of Lifelong Learning" (European Commission, 1996).

The concept of lifelong learning has, for all intents and purposes, replaced an earlier concept, that of recurrent education, which had originally been introduced as a term for those opportunities provided in the education system for adults who had not successfully completed some form of education and wished to have a second chance to do so. One defining feature of recurrent education was that those adults who had become involved in education again, had generally done so after several years on the labour market. Border lines between periods of employment and periods of full time learning were considered to be fixed and clear-cut, while on the other hand, with regard to the concept of lifelong learning, any border lines are considered to be permeable and diffuse with some form of continuation and correspondence existing between employment and learning. In this case, employment provides spheres of experience, where various kinds of learning may also occur. Further, the rationale for the

existence of recurrent education provisions was considered to be that they were to meet some requirement in society at large, while the philosophy behind the concept of lifelong learning is that the individuals concerned are themselves to have sovereign power over these provisions, from the cradle to the grave.

Although a whole range of organisations and researchers have been making use of the concept of lifelong learning in variety of different way, it is nonetheless still possible, according to Hasan (1996), to establish a number of core features that most would agree on. One shared feature is a strong belief in the intrinsic, rather than in the instrumental, value of education and learning. A second feature is a common desire to see the establishment of universal access to learning opportunities, regardless of age, gender or employment status. Regard for the importance of nonformal learning and a general critical view of more conventional educational ideas constitute two additional common features. With regard to implementation, Hasan (1996) goes on to stress the importance of financial and human resources, in addition to the existence of an infrastructure and policy support, together with research and development in education, as further common features.

In more recent theory regarding the concept of lifelong learning, such as that advanced by Aspin and Chapman (2001), four different categories of policies have been identified. The first are those which entail a compensatory model of lifelong learning, the second are those that constitute a model of continuing vocational training, the third implies a social innovation model of lifelong learning, promoting socio-economic transition and democratisation, while the fourth category of policies is that where a leisure-oriented model of lifelong learning is envisaged.

Education in Eastern societies is often viewed as being impossible to explain in terms of economics. Thus, as Okamoto (2001) puts it, lifelong learning is of a sacred and spiritual nature, to be enjoyed by people and intended to improve the mental and spiritual quality of their daily life.

Field (2001) argues that lifelong learning is one of the factors in the transformation of governance, whereby “the state sheds directive powers both downwards (to individuals and associations) and upwards (to transnational corporations and intergovernmental bodies)” (*ibid.*, 2001, p.3). With regard to lifelong learning in Japan, Wilson (2001) describes how this “seems to be the key means for addressing these central issues, ageing, community and economy change” (*ibid.*, p.297).

Tuijnman (1999) provides a summary of these various views of lifelong learning as follows:

“Lifelong approaches to learning are being justified on grounds of the realization, now widespread that countries, communities and business will continue to manage a fundamental adjustment in the forces and factors of production, brought about by a shift from industrial to a “knowledge-based” economy. But lifelong learning is also being promoted for non-economic reasons, on the ground that education forms the basis for a rational, enlightened and democratic society.” (*ibid.*, 1999, p.2)

3.2 Lifelong learning policy in Sweden

In Sweden, the government has placed emphasis on lifelong learning since the end of the 1960s, when the minister responsible for education at the time, Olof Palme, introduced the concept of recurrent education at a meeting of OECD ministers of education. More recent policy documents in Sweden regarding lifelong learning have largely appeared in the period since 1996. The first of these policy documents is from 1994 and is called *Grunden för ett livslångt lärande* (in English, the Foundation for lifelong learning) (SOU 1994:45). The second is from 1996 and this contains general recommendations with regard to lifelong learning, in both a lifelong and a lifewide perspective, concerning pre-school and compulsory education, together with adult education and training (Government Enquiry Report, 1996/97:112; Boström, 1999; Boström 2001a). Subsequently, a policy for the introduction and implementation of rules and regulations for establishing a system of early childhood care and education in Sweden based on the lifelong and lifewide perspectives was introduced. The policy was expounded in an Official Commission of Enquiry Report, entitled “Growing in Learning” (*Växa i lärande*, SOU 1997:21), which appeared in February 1997, and proposed a new curriculum for children aged between 6 and 16 years. The initial terms of reference for this Commission was to carry out its deliberations on childhood education in the recognition of this being a constituent part of lifelong learning, with the intention eventually of establishing equivalent conditions for pre-school, primary school and after-school care.

This was to be achieved by ensuring that pre-schools, primary schools and centres for after-school care would in the future operate in the same institutional context. To further this policy, it was deemed necessary to create teams made up of the various categories of staff in these different types of institution, in order to facilitate co-operation and to enable them to complement each other’s professional competence. The subsequent Bill,

based on this report, was passed into law, becoming effective from January 1st 1998 (Utbildningsdepartementet, 1998a). Consequently children from 1 to 5 years of age in day-care centres, together with those attending pre-school centres and centres for after-school care were all incorporated into the pre-school curriculum. Under these provisions, early childhood education is closely co-ordinated with education in the compulsory school and at the central government level, responsibility for the former has been transferred from the Ministry of Social Welfare to the Ministry of Education and Science in order to underline the increased importance of the role of early childhood education.

Eventually, a second Bill was enacted, containing what is known as “The National Curriculum for Compulsory School” where a strong emphasis is placed on the policy whereby this form of education is to be considered as the first step in lifelong learning (Utbildningsdepartementet, 1998b) For the development of policies with regard to lifelong education and training in adult education in Sweden, see Boström, Boudard and Siminou (2001).

3.3 Lifelong learning and intergenerational learning in Sweden

In the view of the Swedish National Agency for Education (2000), the implementation of the lifelong and lifewide learning perspective policy will have three main practical consequences. Firstly, implementation will have the effect of removing boundaries between a number of different areas of policy in society, since the lifelong learning perspective cuts across policy sectors as education, labour market, trade and industry and social welfare. In addition, different levels of society would be involved, local government, county councils and central government, together with non-governmental organizations and interest groups representing employers, employees and voluntary agencies. The second consequence of the implementation will involve a shift away from public sector responsibility for education and learning towards the private sector. A third consequence will call for greater individual responsibility, with citizens increasingly able to determine an educational career of their own making and will thus gain greater motivation in pursuit of a chosen career. The Swedish educational system is constructed in a way that promotes lifelong learning in various ways. In order to illustrate this, the education system is schematically presented in Figure 3.1. The existing pathways that facilitate mobility between the various levels of education are also indicated. The shaded oval

area in the lower section of Figure 3.1 represents pre-school education, primary-school education and centres for after-school care. Current policy is for a team of primary teachers, pre-school teachers, and staff at the centres for after-school care to be jointly responsible for teaching the pupils during these early years. These categories of education which previously had constituted separate institutional settings for education, are now melded together so that their activities extend along the whole continuum, from formal education, on the left-hand side, through to informal education, on the right hand side. The intention is that this unified setting will provide an adequate foundation for lifelong learning (OECD, 1999a).

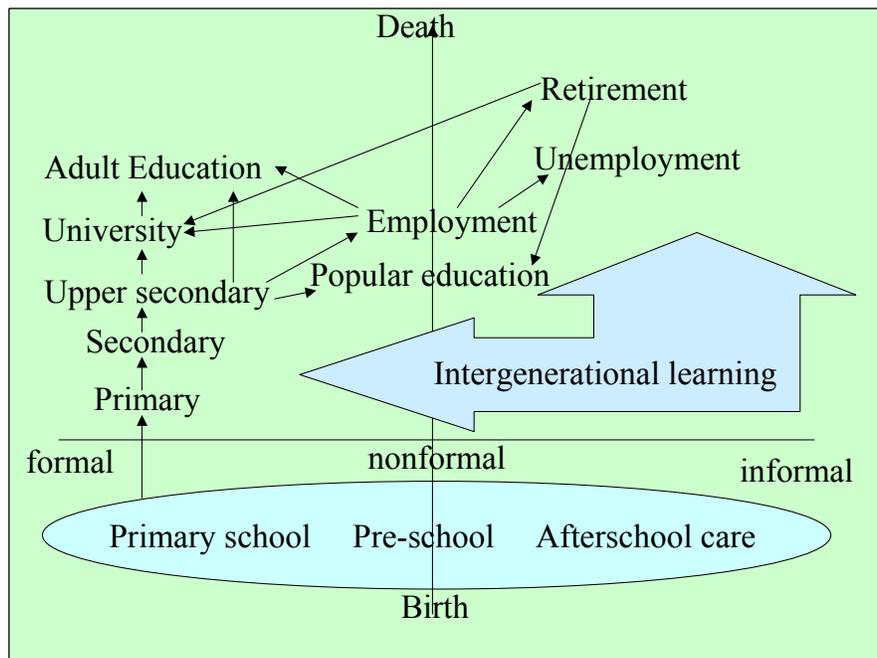


Figure 3.1 Lifelong learning and intergenerational learning in Sweden

It can be seen that formal schooling, on the left-hand side of Figure 3.1, begins at the primary school level and continues through to the secondary, and then on to upper-secondary school level, and subsequently on to university level and/or adult education.

Pupils in upper-secondary school may continue on to university on condition that they meet the entry requirements. The academic and the vocational tracks in the upper-secondary school have been integrated since 1991. In addition, a core curriculum has been introduced in order to provide the foundation for the implementation of the policy aim of enabling all pupils who have satisfactorily completed their courses, to continue on to some form of higher education, should they wish to do so. Adult education

facilities in Sweden are available for those who are 20 years of age or older. It is also possible to delay entry into higher education in order to gain work experience. In Sweden, any adult is eligible to enter some form of higher education, including a university, on condition that they have either a pass grade from the equivalent of the upper-secondary school or adult education, or have fulfilled the requirements of what is known as the 24:4 rule, - the applicant is at least 24 years of age - or will reach that age during the course of the academic year in question - and has been in gainful employment, on at least a half-time basis, for a minimum of four years.

In Sweden, there is no upper age-limit for commencing university studies, so that even after the official retirement age, there are opportunities available for senior citizens to commence studies at this, or some other, level. It is, in fact, these senior citizens who form the backbone of participants in voluntary forms of popular education (as indicated in Figure 3.1). One form of popular education, established in Sweden since the latter part of the 19th century, are the programmes offered through “study circles,” which at present are organized by 11 nationwide voluntary educational associations. Another form of popular education is that offered by folk high schools, of which there are about 150 throughout the country, and which are run either by county councils or by trade unions, churches, temperance societies or other non-governmental organizations. The programmes they offer are largely residential and they are more comprehensive than those provided by the voluntary educational associations. The latter are usually affiliated with a political party or interest organization. Both folk high schools and voluntary educational associations receive state subsidies while remaining very free to organize the courses and to develop the contents much as they wish. The intergenerational learning that is taking place in the school system is indicated by a thick arrow in the model in Figure 3.1 and will be further explained in 3.6.

3.4 Intergenerational learning as an integral part of lifelong learning

In 1992, the Public Policy Institute of the American Association of Retired Persons sponsored a conference with the theme “justice across generations”. Twenty-two researchers were invited to discuss this theme and Bengtson and Murray (1993) specified three main problems occurring between generations in the United States. First, there is the continuation of social order over time, despite demographic changes in the different age

cohorts, due to declining birth rates and aging. The second concerns how “... the group will foster adaptivity to changing circumstances involving economic, social, and environmental development” (*ibid.*, p.114) and, finally, the resolution of conflicts that may arise between different generations. Bengtson (1993) suggests four societal processes that are of crucial importance in addressing the problems mentioned above. These are: “(1) power and authority mechanisms; (2) affect relationships; (3) norms of assistance, support, and obligation between the generations; and (4) the continuing process of negotiations about reciprocities between generations across the life course. These social processes are involved in what can be described as an unfolding social contract between emerging age groups within social structures.” (*ibid.*, p.114). According to Bengtson (1993), interaction between individuals from different generations plays an important part in the growth of trust, the development of the ability to rely on each other and the strengthening of the links involved in such relationships between younger and older people. Such interactions are considered to fall within the scope of the concept of intergenerational learning.

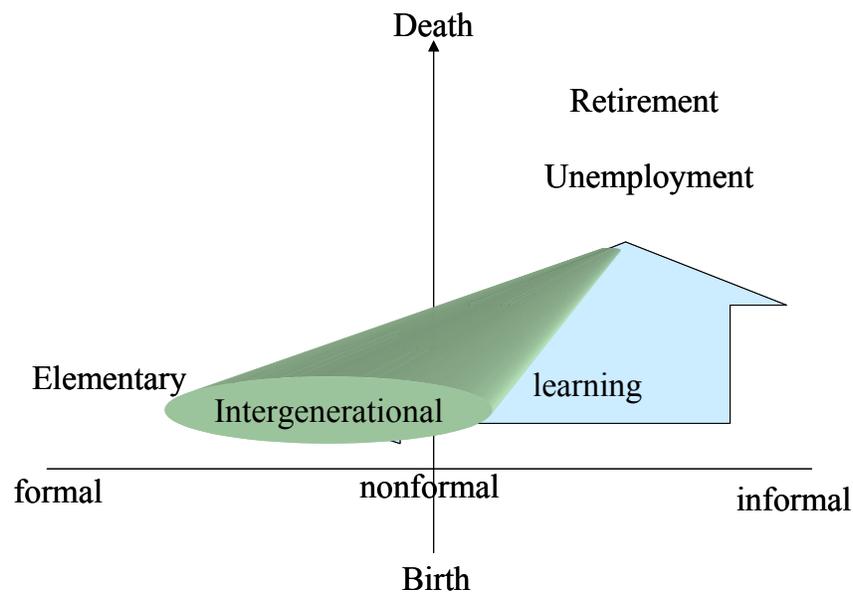


Figure 3.2 Intergenerational learning as an integral part of lifelong learning

Intergenerational learning may be viewed as an integral part of lifelong learning and a means by which it is possible to introduce aspects of informal learning into the system of formal education. Several researchers have acknowledged such a link between intergenerational learning and

lifelong learning. Kaplan (1998) views the concept of intergenerational learning as being related to lifelong learning, since it enables individuals to access learning experiences throughout their entire lifespan. In many cases, according to Kaplan (1998), senior citizens generate community-based learning experiences, not only for older people themselves, but also for the young. Newman (1997) suggest that the outcome of intergenerational programmes is an appreciation of the value of lifelong learning, together with increased self-esteem and improved life satisfaction. Since intergenerational programmes for senior citizens are included in the field of learning and social participation, according to Sawano (1999), these programmes are also implemented as an integral part of lifelong learning programmes.

The model of intergenerational learning was described in Chapter 2, and this may now be applied to the system of lifelong learning in Sweden, as illustrated in Figure 3.1. The result is a model of intergenerational learning as an integral part of lifelong learning, as shown in Figure 3.2. The intergenerational learning transmission that occurs in school between the pupil and the granddad, a formerly unemployed or retired male senior citizen, is denoted by the shaded cone, where it is clearly seen to constitute an integral part of lifelong learning.

3.5 Intergenerational learning in Japan, Sweden and the United States

Intergenerational learning is to be found in both Eastern and Western countries, although there is some variation with regard to form depending on the specifics of the cultural context. In addition, national policy regarding social issues and lifelong learning would also appear to be important in determining the manner in which intergenerational learning is viewed in each particular case. As mentioned earlier, there has only been very limited research carried out in this arena on an international level. Since the 1970s, in the United States there has been a tradition of organizing intergenerational programmes and a “national awareness” of lifelong learning was promoted in 1990 when the 6th of the National Educational Goals concerned Adult literacy and Lifelong Learning (Pugsley, 1999) This is in contrast with Japan, where most people consider those activities that might be termed lifelong learning as forming part of normal social life. This was confirmed when the author of this monograph,

in the spring of 2001, visited schools and community centres in Kyoto and Yokohama. Through observation and interviews with school principals, together with granddads and grandmothers, and after studying Japanese policy documents and curricula, it became clear that intergenerational learning is indeed considered a part of normal social life. Senior citizens showed eagerness in establishing contact with pupils and the latter, in turn, demonstrated their appreciation of this. Such interaction is also prescribed in the curriculum and in that way has become part of the daily life of the school. However, in Japan, the outcome of such intergenerational interventions is never measured in economic terms, but rather they are valued as a much appreciated part of social education as a whole, allowing pupils the opportunity, in their spiritual life, to mature and grow (Hashimoto, 1996; Okamoto, 2001; Thang, 2001).

A similar conclusion was drawn by Kaplan (1998), who explains how intergenerational initiatives in Japan are a “ ... powerful stabilizing force within Japanese society” (*ibid.*, p.2), as they contribute to a sense of community solidarity and cultural identity for the participants, “ ... and help people to pursue their educational objectives, arts and recreation interests, desired state of health and welfare, environmental preservation and community development goals and attain a sense of religious and spiritual well-being” (*ibid.*, p.2).

With regard to one example of a country in the West, Newman (1997) described the background to the success of intergenerational programmes in the United States and thereby identified three main reasons for this success. The first of these reasons was stated to be the result of measures to ameliorate “ ... social problems, such as isolation, inadequate support systems, and the disconnectedness of both generations from each other and from their communities” (*ibid.*, p.3), while the second reason is the result of measures to counter “ ... economic problems, such as inadequate employment opportunities for the young and the old” (*ibid.*, p.3). Finally, the third reason is because of efforts to deal with “political problems, such as the competition for shrinking human service funds” (*ibid.*, p.3).

The situation in both the East and the West has also been described by Kaplan (1998). Having compared intergenerational initiatives in the United States and Japan, he determined that a number of common perspectives were to be found. In both cases, the intergenerational initiative, firstly, implies that strategy roles are made available to senior citizens, through which they are allowed to confront “ageism” and, secondly, it “ ... promotes pro-social values on the part of youth, promotes

intergenerational understanding and mutual support in the face of changes in family structure, and mobilizing the talents, skills, energy and resources of the young and the elderly” (*ibid.*, pp.17-18). Nonetheless, Kaplan (1998) not only found significant differences between these two countries but also that significant changes were taking place within each of them. Thus, in the United States, the intergenerational interventions in the past had, more often than not, taken the form of social movements but he could find indications that a shift was taking place in this respect:

“Whereas initiatives have traditionally been designed to create shared fun, friendship and learning experiences for the children, youth and senior adult participants, more attention is now being paid to the potential of intergenerational programmes to provide solutions to social problems. There are now intergenerational program initiatives designed to investigate and improve community conditions.” (*ibid.*, p.19).

International efforts are afoot to increase and extend research in the arena of intergenerational interventions, both with regard to discussion of practical matters, such as programme planning, implementation and evaluation, and with regard to the development of international common understanding, awareness and theory.

Although there has been a long history of intergenerational interventions in Sweden (Boström, 2000a; Boström, 2001b), in terms of the considerable level of informal learning that has taken place, and which continues to take place today, the concept of intergenerational programmes is not in common usage. Today, many initiatives continue to be taken throughout the country, for example, on the part of individuals, voluntary organizations and interest groups, as churches and sports associations. This is not to say that there are no differences in this respect between, for example, rural areas and urban areas or between different groups within the population. There are, for example, almost one million immigrants living in Sweden and these groups might well have organized different structures in this respect. But, at present, most initiatives with regard to intergenerational interventions, and possible differences in their distribution across the country, remain largely undocumented and unresearched.

With regard to senior citizens, a questionnaire survey was carried out in 1994, as part of a longitudinal study initiated in 1938, known as the Malmö study (Bang, 1995). Most of the respondents were 66 years old in 1994; they form part of the first welfare generation and the questionnaire was concerned with their opinions about life after they had retired. The questions were closely related to the concept of quality of life, where it was

expected that health issues would play an important role. A qualitative analysis of their responses to, and comments on, the questionnaire, indicated that one of the most important dimensions of quality of life was, in fact, "network." It was shown that "network" was considered to be almost twice as important to them as "health" and "work." "Network" was subdivided into categories containing questions about grandchildren, children, husbands and wives, parents, friends, workmates and pets. Of all the categories, grandchildren were considered the most important, closely followed by children and husbands and wives. The results of this study indicate the continuing importance of the family network in Sweden.

In SOU (1997/98:113) the general theme of the UN International Year of Older Persons, "A Society for All Ages," was adopted by the Swedish government. In Sweden, it was decided that the purpose of this theme was to be to encourage efforts towards initiating broader discussion on such subjects as lifelong learning and contacts between generations, therefore the government initiated the Senior Citizen Project to follow up and continue the work on these questions. This project was in operation for three years, 1998-2000.

Responsibility for child-care and the education of children rests with the Ministry of Education and Science, while the Ministry for Health and Social Affairs is responsible for the care of senior citizens. Nonetheless, there are representatives from both these ministries involved in the Senior Citizen Project in order to facilitate the implementations of measures to encourage contacts between generations. There are also a number of programmes which have been established by senior citizen interest organizations themselves. Thus, for example, at the 1996 annual congress of the Swedish Pensioners' National Organization (Pensionärernas Riksorganisation – PRO), it was decided to include a section on intergenerational learning in their programme, where three objectives were set up: to decrease the segregation between the younger and the older generations; to create a society, in collaboration with other generations, a society that is safe for all; and increase the older generations involvement in society through making use of their experience and knowledge.

Table 3.1 Comparison of the status of intergenerational movements

	Japan	Sweden	United States
1	The Government set up a National Council on Educational reform in 1984 which, in its report, promoted a “transition towards a lifelong learning system (1987)	National plan for policies for the elderly SOU 97/98:113 and a Committee called Senior 2005 (SOU 2002:29) is investigating intergenerational learning	In 1970s, intergenerational programmes started in schools, funded by the state. Several different NGOs started. 1995 White House Conference on Aging.
2	X	X	X
3			X
4			X
5	The growing need for learning in a “mature society”. An increasing number of people seeking greater meaning of life through learning for learning’s sake*		
6	X	X	X

*In a “maturing society” characterized by an improved level of income, an increase in leisure time, aging of the population and a rise in the level of people’s educational attainment, the need for learning as a source of spiritual fulfilment increases. (Ministry of Education, Culture, Sports, Science and Technology, 2000)

1. Government recognition and policy
2. X=Intergenerational programmes as complement to social benefit provided by the state
3. X=Intergenerational programmes as replacement for benefits provided by the state
4. X=Economic outcomes
5. X=Quality of life as outcome
6. X=Funding from the state

The countries above have been chosen because the two first have had intergenerational co-operation for a longer period and one country is from the Western part of the world and one is from the Eastern. In this way Sweden can be compared to these two countries. The recognition of intergenerational learning of the government, the sources for funding and the kind of benefits that are expected in each country are described in Table 3.1. The governments in all three countries recognize and support intergenerational programmes. In Japan, though, this is promoted because it is part of the lifelong learning system in the country. Intergenerational programmes are a complement to social benefits provided by the state in

the three countries. In the United States these programmes are sometimes a replacement for benefits provided by the state and some intergenerational programmes are expected to have economic outcomes. This can be compared with Japan, where quality in life is regarded as an appropriate outcome of intergenerational initiatives and projects. Swedish documents (SOU, 2002: 29) also propose increased quality of life as an outcome of intergenerational projects. In Sweden and the United States funding from the state is mostly for specific projects. Lifelong learning is promoted by funding from the state to Lifelong Learning Centres in all parts of Japan. These centres also deal with intergenerational learning, albeit without specially using the label “intergenerational”.

3.6 The granddad programme

This intergenerational project started in the autumn of 1996, when a retired male senior citizen, together with a teacher, realized there was a need for more male adults, other than teachers, in schools. The background to this need was the situation that had arisen in Swedish schools. The pupil:teacher ratio had decreased from 100:9, in 1991-92, to 100:7.7 in 1996-97. At the same time the proportion of female teachers and school leaders was 71.3%, while the figure for males was 28.7%. A total of 31 500 children, of the 1.8 million in Sweden aged 0-18 years, were living with their mother alone (or in other words, many absentee fathers and, often, a lack of a family network). Furthermore, 69.7% of females in Sweden, aged 16-64 years, were in paid employment. Trends such as these can create a stressful situation for female teachers having to cope with young boys who have been brought up with no, or few, adequate male role models near the home.

The number of “granddads” in the project increased gradually and, by December 2000, there were about 41 male senior citizens working in 33 different schools. These male senior citizens work in the schools on a voluntarily basis. Those eligible for this kind of work fall into two categories. One group has already reached retirement age, whereas the second group was over 55 years of age but had been unemployed for a lengthy period of time. In Sweden, the official retirement age is 65 years of age but in reality the situation is quite different for many in Sweden. Loss of employment after 55 years of age is often followed by early retirement, resulting thereby in withdrawal from that social network which is provided

by being part of a workforce in a work environment. Even though funding from the Social Security and Welfare systems provides some income maintenance, many “granddads” often express an ardent desire to be in work and to feel that they are, in this manner, still a vital part of society. In their work in the schools they are needed and wanted by teachers and pupils. Furthermore, the “granddads” receive a salary which is paid, in part, by the employment office and, in part, by the schools. The hypothesis is that these “golden men” will stay healthy and active because of the better quality of life they are now enjoying while, at the same time, they are contributing to the increase in social capital within the schools.

The benefits to be derived from this programme constitute a two-way flow. On the one hand, the pupils gain the opportunity to meet and learn from a member of the older generation, who have a different type of “time” at their disposal, which they are able to spend with individual pupils, than is the case for the teacher. On the other hand, the retired or unemployed senior citizen gains the opportunity to engage in activities that give him a sense of having a significant role to play in society, rather than remaining at home, perhaps feeling isolated and with nothing useful to do. Therefore, although the granddad voluntarily chooses this work in order to help the pupils, he also earns increased self-esteem and gains an improved quality of life through the engagement and participation in a network derived from a lifelong-learning situation. The granddad is not in competition for, or to carry out, any of the duties or tasks of a teacher or any other staff in the school. Of course, it is natural that there should be other prerequisites for being accepted to work as a granddad in the school, such as a fondness for children and adolescents, an ability to be aware of their needs and a preparedness to relate to them in a positive way. Consequently, a steering group stipulates that each granddad and each school are required to accept an initial mutual trial period before the placement is confirmed. Thus each party concerned is able to request that the placement be approved, or otherwise, by the steering group at the end of the trial period.

There are three main reasons why the granddad intergenerational intervention became the subject of the present study. First, this intervention occurs on a regular and scheduled basis and constitutes a relatively long-term intervention (it usually occurs on a daily basis over a period of between six months and two years). These factors allow a more quantitative method of analysis to be used than would otherwise be the case. Second, although the intervention is at present largely confined to the greater Stockholm area, nonetheless a wide variety of different cultural backgrounds and contexts may be observed in the target population. Third,

since participation is voluntary, the granddad programme in these compulsory schools in Sweden may be considered as constituting an example of how theories concerning lifelong learning may be investigated, when brought to bear in one particular arena of practice. In addition, since this particular programme entails both a lifelong perspective and a lifewide perspective, it offers an arena which is amenable to research that is dedicated both to an investigation of the importance of social capital on practice and to establishing the manner in which this relates to a conceptual framework described earlier in the present study.

3.7 Summary

Lifelong learning has become an important learning policy supported by organisations such as UNESCO, the OECD and the European Union. It is also an important issue in Sweden. However, the concept of intergenerational learning is quite new, though it has been used in the Japan and United States for some time. Intergenerational learning can be seen as an integral part of lifelong learning when the lifewide perspective in the form of both formal and informal learning is taken into consideration.

The intergenerational programme with granddads in Sweden is described and investigated because, although it is a small programme, it occurs on a regular and scheduled basis; it constitutes a relatively long-term intervention; it may be observed in a wide variety of different cultural backgrounds and contexts; and because participation in the granddad programme is voluntary in compulsory schools in Sweden.

Chapter 4

Social Capital

4.1 Introduction

While, efforts have been made in Western societies to develop human capital, relatively little attention has been paid to “soft” capital, in the form of the social capital related to human co-operation and quality of life in the workplace. However, in a recent publication, *The Well-being of Nations* (OECD, 2001a), the role of both human capital and social capital are in focus, where the importance of quality of life and well-being are emphasized. These values in Eastern societies, on the other hand, have long been considered of considerable importance and not possible to explain in only economic terms. As Okamoto (2001) puts it, lifelong learning ought to be of a sacred and spiritual nature, to be enjoyed by the people involved and to improve the psychological and spiritual quality of daily life, what is termed *kokoru* in Japanese. Okamoto (1992) had earlier described some of the explanatory components of *kokoru* as being:

“ ... respect for the life of human beings and animals, ability to positively consider one’s way of life, attitude to seek truth, sensitivity to beauty and the sublime, respect for nature, sympathy and generosity, gratitude to others, autonomy and self-control, contribution to the public interest, egalitarian attitude, cooperation with others, sensitivity to morality, good habits and manners in daily life” (Okamoto, 1992, p.36).

Thus, there are several aspects of the Japanese concept of *kokoru* that may be compared to the three entities included by Coleman (1988) in the description of social capital as mentioned in Chapter 2. These entities are norms and structures, cooperation and trust.

4.2 Various interpretations of the concept of social capital

When discussing the reasoning behind considering social capital as a form of “capital,” Sadler and WookWon (1999) used six different attributes which, they argued, allowed social capital to be considered as being similar

to “other capitals.” The first of these attributes concerns viewing social capital as a resource, which may be invested for future use, even though the returns might be less secure. The second is that social capital is appropriable, that is to say, an actor’s network may be appropriately used for other purposes (such as information or advice) and that those advantages derived from an actor’s position in society can be converted to economic advantage or other types of advantage. The third attribute is that social capital may be complement other forms of capital. The fourth is that social capital requires maintenance, otherwise its efficacy will be reduced. The fifth is that social capital is a “collective” good rather than the private property of those who derive benefits from it, although it is possible for some people to be denied access to it. The sixth is that even though social capital may be destroyed by a single individual, it is not located in any one individual person since its existence is dependent on co-operation between individuals.

Bourdieu (1984, 1992) was one of the first to develop the concept of social capital in relation to cultural capital, which, he claimed, is a collective phenomenon, because, it is shared by members of, for example, a voluntary organisation. Bourdieu (1984, 1992) proposed, that a further characteristic of social capital is that it is based on common and mutual cognition and recognition. Thirdly, Bourdieu (1984, 1992) considered that the concept of social capital enjoys a symbolic character whereby it constitutes the basis for the legitimatisation of social differences between people as members of an organisation.

Prior to this, Coleman (1971), among the first to make use of the concept of social capital, in a book entitled *Resources for Social Change*, elaborates on the idea of the convertibility of assets. Coleman (1971), whose theory concerning the convertibility of assets was based on his research, during the 1960s, on equality between nonwhites and whites in the United States, came to the conclusion that although there were obviously wide variations between these groups, “ ... the cluster of high political power, economic well-being, education, and effective opportunities ... is found principally among whites” (*ibid.* p.1). This situation, where these opportunities are not open to the nonwhites, Coleman refers to as a “resource deficit.” With regard to Afro-Americans, Coleman (1971) takes into consideration those collective movements by which they have gained power through their collaboration in fighting racism and they used the power derived from their democratic right to vote and they gained access to posts in public service employment as the police force. Coleman (1971) suggests that increasing job opportunities through

increasing demand for labour will eventually provide financial capital for families which, in turn, will allow them to accumulate other types of capital. It was in this way, in the view of Coleman (1971), that social capital could be regarded as an asset that could be converted into some other form of capital asset. This is one aspect of the resource conversion theory, the convertibility of assets could take different forms, and for example, economic capital could be converted into other assets, as social capital. Similarly, social capital could potentially be converted into human capital. Thus Coleman's definition of social capital is based on his resource conversion theory:

“ ... in short it appears that the provision of any community asset requires two elements: some set of individual resources that can be shared and the cohesion, institutions, and systems of trust that allows these resources to serve the whole community.” (Coleman, 1971, p.41)

In later works, Coleman (1988; 1990) refined the concept of social capital and defined it as follows:

“Social capital is defined by its function. It is not a single entity but a variety of different entities, with two elements in common: they all consist of some aspect of social structures, they facilitate certain aspect of social structures and they facilitate certain actions of actors – whether persons or corporate actors – within the structure.” (Coleman, 1988, p.98)

Coleman's work on social capital was conducted within the framework of the field of sociology of education. However, the concept has been explored in a number of other disciplines and areas of research as well. In fact, one of the distinguishing features of the concept of social capital is that it embraces a number of different areas of investigation, thus making it possible for the concept itself to be interpreted in a variety of ways, depending on the paradigms that are dominant any particular discipline. In addition, the concept itself consists of a variety of components that facilitate its application at both the micro level of the family or organisation and the macro level, as in comparative studies of different countries.

Although the concept has been used in a number of areas of investigation, and in a variety of disciplines, there is nonetheless one common denominator in that most of this research entails the three pillars of the concept, as proposed by Coleman trust, communication and network.

It is appropriate at this juncture, with regard to the utilisation and further development of the concept of social capital, to mention the seminal work of two other researchers, namely Putnam (1993), in the field of political science, and Fukuyama (1995), in the fields of economic history and sociology. Putnam (1995), in his article entitled “Bowling alone,” describes the manner in which American society has changed, whereby people, in earlier times, joined together to form associations but today pursue a more individualistic way of life. The title of the article alludes to the fact that, between 1980 and 1993, the total numbers of bowlers in the United States increased by 10 per cent while, during this same period, league bowling decreased by 40 per cent. In this study, Putnam introduced the concepts of “bonding social capital” and “bridging social capital,” where the former is a term that refers to the links between like-minded people while the latter refers to the forging of links between heterogeneous groups.

Fukuyama’s ambition, in his books *Trust* (1995) and *The Great Disruption* (2000), is to describe and investigate the component entities that are subsumed under the concept of social capital. In *The Great Disruption* (2000), Fukuyama compares data, from Japan, Sweden, the United States, together with England and Wales, on reported crime, on families and on surveys of trust, values and civil society. He found, with regard to reported crimes, particularly rates of violent crime and rates of theft, that in the latter three countries these were increasing whereas in Japan they were either decreasing or at least at a consistently low level. In the view of Fukuyama (2000), it is family norms that “... both constitute social capital and are critical for propagating social capital to succeeding generations” (*ibid.* p.24). However, Fukuyama (2000) is not of the opinion that women are to blame for these negative trends and family fragmentations. Further, while women were making their entry on to the labour market, there were also changes taking place with regard to family norms whereby men, who had formerly been financially responsible for both women and children, were now, to a greater extent, to share responsibility with women for child-rearing. Thus, while on the contrary, Fukuyama (2000) considers that blame rests squarely with men, he also considers that those considerable changes that have taken place, with regard to gender relationships, have not always had such positive effects as many feminists would claim.

Fukuyama (2000) also considers that wage differentials between those who are richer and those who are poorer have had an effect on women’s situation since their entry on to the labour force, such that

“ ... the educated, ambitious, and talented women broke down barriers, proved they could succeed at male occupations, and saw their income rise; but many of their less talented sisters saw the floor collapse under them as they tried to raise children by themselves in low-paying jobs or, for the poor, on welfare.”
(*ibid.* p.121)

Thus both rising crime rates and a high proportion of single-parent families covary with reduced social capital in the countries where these occur.

In contrast to this description of the depletion of social capital, Fukuyama (2000) also describes the manner in which social capital may be formed, from the bottom up rather than from the top down:

“What we can see in many contemporary workplaces, however, is something of the opposite: formal, rule-bound, hierarchical relationships are being replaced by flatter ones that give subordinates greater scope for authority, or else by informal networks. In these workplaces, coordination bubbles up from below rather than being imposed from the top, and this is based on shared norms or values that allow individuals to work together for common ends without formal direction. It is based, in other words, on social capital, which becomes more rather than less important as the complexity and the technological intensity of the economy increases.” (*ibid.*,p. 193)

The one common denominator in the utilization of the concept of social capital entailing trust, communication and network, as described above, is also found in other research. In a document prepared by CERI (OECD, 1999b), for example, social capital is referred to as consisting of those various aspects of social life that induce people to act together, while the important products of individuals learning, with regard to both intragroup and intergroup relationships, are considered to be creating synergy and providing cohesiveness, trust and solidarity. Further, Inglehart (1999) argues that economic development is closely linked to interpersonal trust. This claim is based on the findings of the 1990-1991 World Values Survey, which encompassed sixty different societies, representing 70 per cent of the total population of the world. Schuller and Field (1998) states that, as individuals in a society develop skills and knowledge, the stock of human capital accumulates in that society, at the expense of individual autonomy, with the latter becoming less effective as it becomes increasingly divorced from social relationships. In another study of social capital, conducted by Woolcock (1999), a member of the Development Research Group at the World Bank, the concept is described in such a manner that it opens up the possibility for the existence of negative social

capital to be taken into consideration. Thus Woolcock (1999), when taking into account the social capital that is found in clubs, associations and societies, in communities where people meet and cooperate, describes how some of these are either isolated from the rest of the society or exclude themselves from the rest of society, the risk arises that negative social capital will appear. However, such negative social capital is not necessarily negative for those actors involved within such organisations or institutions but rather it is to be considered negative social capital for society at large. Some examples of this are anti-social gangs, drug cartels and organized criminal syndicates. Since the concept of negative social capital is relatively recent, although it has already been studied and described in numerous articles, no indicators for this concept, based on the three pillars of trust, communication and network, have as yet been identified.

Recently, Wijkström (2001), working in the field of business studies, has defined social capital from the perspective of that discipline. He has studied voluntary organisations and the manner in which they may have contributed to the accumulation of social capital in Sweden. With reference to the claims of Putnam (1993), that membership of various organisations be used as an indicator of the stock of social capital in a country and that there should be cause for concern about the state of democracy in any country where these membership levels are falling, Wijkström (2001) prefers to see more dynamism in such changes in membership. He describes, in the case of Sweden, the manner in which, on the one hand, there has been a falling off of membership (-32%) in the “older” voluntary organizations, as those in the traditional non-conformist church movement and the temperance movement, while on the other hand, membership of associations under headings as “identity and interest” (21%), “financial ownership” (37%) and “community interest” (28%) have seen substantial increases. These increases remain significant even after adjustments have been made for population growth in Sweden during the period between 1985 and 1998.

4.3 Children and social capital

Before the industrialisation of Western societies, mutual dependency between children and their parents was a fact of life. Infants and young children were dependent on their parents while parents, in their old age, were dependent on their grown-up children. Today, however, because of pension funds and retirement insurance schemes, it is possible for parents,

even in their old age, to retain their independence from their children and to be able to manage on their own. Coleman (1990) speculates as to whether these present-day circumstances have also resulted in the creation of an incentive for decreasing birth rates and reducing investment in the education of children. Whether there is no longer an equally strong imperative for investing in children and child-rearing as this may not be such an important issue with regard to the welfare of the parents in their old age.

Coleman (1990) also observed that it was with the transformation of the exchange economy to the money economy that, for the first time, males left their households in large numbers in order to exchange their labour for wages. Nonetheless, one adult, the mother, continued to remain in the household, together with the children, during this early period of the money economy. But eventually women also left the household, and even the neighbourhood, in order to work for wages. It was this exodus to external workplaces that saw the beginning of the process of fragmentation of the family household, from the three-generational unit to the nuclear family, and, eventually, through further fragmentation as a result of increasing divorce rates, to the single-parent family.

While these various processes resulted in greater numbers of parents physically moving from their children's presence, Coleman (1990) goes on to state, that at the same time a variety of different corporate actors discovered opportunities to show increased interest in children and their own relationship to them. Thus television programmes were made specifically for child viewers, and toys, clothes and entertainment aimed specifically at children were produced, to strengthen the relationships between children and these other adult actors.

When discussing these aspects of child-rearing, Coleman (1990) uses two different concepts, denoting two parallel structures, but both concerning those actors who have an impact on the upbringing of children. The first of these concepts he terms the primordial structure, which is based on the family together with those groups that derive from the family, for example, the extended family, neighbourhood and different religious groups. The second of these concepts concerns the structure of corporate actors in society. The latter are wholly independent of the family and are to be found in the form of economic organisations, firms and trade unions. As noted above, Coleman (1990) explains how corporate actors have found opportunities to establish and strengthen their own relationship with children. These opportunities arise as a consequence of children needing to feel that some form of adult authority is taking responsibility for them, but

since parents are often absent from home, spending an increasing proportion of their day at work, many children remain at home alone, isolated from parents and other adults.

This situation has brought about a change in the balance of influence between the various adult actors around the child while growing up. In addition, while parents have long-term interests in the lives of their children, corporate actors have only more short-term interests. Thus, there are built-in conflicts in this array of various adult interactions with the child, where corporate actors wish to persuade and induce the child to act in certain ways, particularly with regard to consumption of goods that the corporate actors produce. Adult authority thus rests to decreasing degrees in the hands of the adults in the family while child-rearing, which in former times was a by-product of everyday life, has become much more complex than it has ever been before.

With regard to the present-day complexities with respect to child rearing, it would appear to be appropriate to bear in mind the statement by Okamoto (2001) on the importance of teaching children good “attitude development” and a “co-operative attitude” in order to achieve *kokoro*, as exemplified by the formation of a cooperative attitude in school through working in a *han* (Japanese for group). In the case of *han*, pupils usually work in a group consisting of 5 or 6 children, whereby the class as a whole consists of between 4 and 6 *han*. There is rotating leadership in each *han*, and this group is one of the important ways in which pupils learn to cooperate.

4.4 The voluntary sector and social capital in a lifelong learning perspective

In countries that have not reached the same level of industrialization as most of those in the west, the family continues to maintain a very strong position (Maintao, 2000). This implies that no action is required to bring family members closer together. In industrial societies, such measures on the part of the community, together with individuals, continue to be required and have developed in the form of voluntary action. Initially, most of these measures were not subject to formal laws or regulations but developed as part of that informal learning which arises when people come together and work towards a common goal. This may occur in groups of

colleagues, in sports clubs, in various forms of cultural activity or in other forms of voluntary action.

The outcomes of such activities are sometimes known as the social economy and these networks result in the creation of social capital (Putnam, 1993, 2000). A working party in the Swedish Ministry of the Interior has investigated the Swedish social economy and agreed on the following definition: "... the social economy consists of organized activities which have primarily a social goal and are organized independently of the public sector" (Regeringens arbetsgrupp, Ds 1998:48, p 6).

The social economy and its relation to lifelong learning are shown in diagrammatical form in Figure 4.1. The social economy is to be found on the right-hand side of the diagram, where informal learning is taking place and where the voluntary sector is situated. When this social economy has become validated, it is then considered to form part of the formal sector of society where some of the organizations receive state subsidies, for which purpose they are required to establish an organization in accordance with those specific provisions stipulated in public documents in the sphere of responsibility of the state.

There are also those individuals whose new skills have been officially validated and who are then able to utilize them in the community in a more formal manner. This is an example in practice of what Coleman has termed resource conversion theory (Coleman, 1971). In the report from the investigation in Sweden, above, it is stressed that the term economy does not refer to the extensiveness of an organization in the financial sense and that it is of some importance that the term be applicable to popular movements in Sweden where democratic decision-making procedures are combined with personal engagement on the practical level. The working party are concerned to point out that financial considerations should not mask social factors and that sometimes it is necessary to utilize financial aspects in order for the social aspects to be taken seriously. Thus, it can be observed in Figure 4.1 how some parts of a voluntary organization may be located in the formal sector while other parts are located in the informal sector, while together they form a cycle. What is important for everyone is that the activities serve the needs of the members, individual members of the public and society at large.

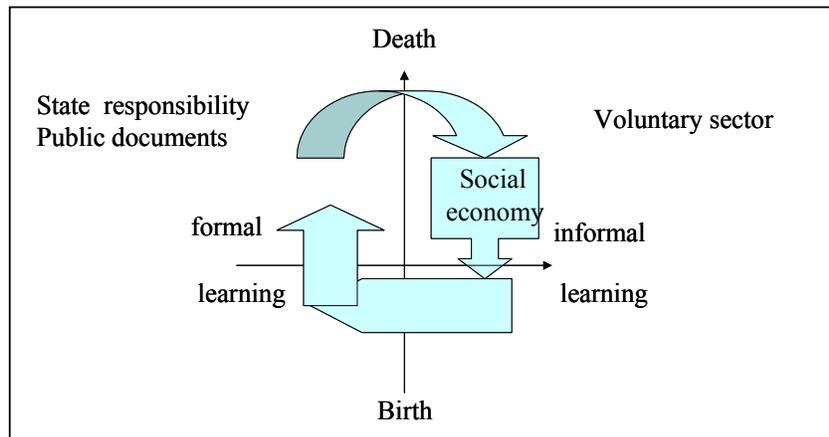


Figure 4.1 Social economy in the lifelong learning perspective

Validation is a significant aspect of lifelong learning and the Swedish National Agency for Education (Skolverket, 2000a) has declared this to be of importance because (a) it is essential, from the point of view of social economics, that use is made of the extensive knowledge that people have already gained in various areas and (b) that individuals should not be required to spend time and resources on matters of which they already have a command. Through the identification of knowledge and skills, through the assessment of this knowledge and these skills and, finally, through their recognition and accreditation, it is possible to provide well-founded validation of the knowledge and skills of individuals within the informal sector.

In Japan, the Ministry of Education and Science is also responsible for Sports and Culture (MESSC), precisely in order to be able to extend responsibility over the complete spectrum of lifelong learning. This implies that, in Japan, the concept of lifelong learning also embraces this voluntary sector. In this manner “... lifelong learning covers a wider range of activities, hobbies, including not only school and social education but also sports, cultural activities, hobbies, recreational activities and volunteer activities” (MESSC, 2000, p.52). The Ministry of Education and Science also promotes the validation of work in the informal sphere of lifelong learning.

“Lifelong learning can provide the knowledge and techniques needed for participation in volunteer activities, while volunteer activities offer a way of utilizing and enhancing learning achievements. In building a learning society, it is important to create an environment in which the public can put their

acquired skills and knowledge to use by participating in volunteer activities at any stage of life” (MESSC, p.60).

The term ”social education” (*shakai kyoiku*) is thus used in Japan. This is a term that is applied to all those forms of education which are not covered in the normal curriculum for primary and secondary schools and higher education. It is provided for people of all ages, from small children to senior citizens. All kinds of facilities and functions of the community, including private homes, schools, company and private facilities are utilized as sites for social education. It is in this manner that informal learning is brought into the formal learning context.

A variety of surveys carried out in Japan acknowledge and confirm that changes in lifestyle have taken place. There have been changes, since the 1970s, with regard to the balance between enrichment of mind and material riches. Thus, while in the 1970s about 40% reported that they considered enrichment of the mind to be most important and a further 40% reported that they considered material riches to be most important, in 1997 56% reported that they considered enrichment of the mind to be most important while 30% reported that they considered material riches to be the most important. Enrichment of the mind may be interpreted as a concern for the quality of life.

4.5 Concept of volunteerism

Volunteerism, in the view of Kaplan (1998), involves the notion of people attempting to make a positive contribution to society “in terms of assisting with the efforts of social welfare oriented groups and organisations” (*ibid.* p.53). Kaplan (1998) goes on to state that such volunteer efforts are the “driving force” behind many intergenerational initiatives and programmes.

According to Haberman (2001), volunteerism is, first, a collective concept for positive contributions derived from some interest or motive about one’s own engagement in society, and secondly it arises among both individuals and groups, and thirdly it is not, in principle, paid work. Volunteerism, in Haberman’s (2001) view, implies both engagement and action. Haberman (2001) carried out an empirical study that was focused on the motives behind volunteerism, where the “ ... empirical evidence suggests that there is (still) a lot of cohesion in modern society, more voluntary work in sports clubs and patient associations than ever and at least as many people involved in volunteering as before.” This study was

carried out in Denmark, where a questionnaire was answered by 3 716 volunteers. The typical sports volunteers were found to be young males, less than 40 years of age, while typical social volunteers were found to be senior citizens, over 60 years of age and the typical volunteers in the patient organisations were mostly middle-aged females. It was also found that the motives of the respondents were mixed, where values were stated to be the most important motive, followed by learning and identity on the part of the volunteers in the social sector.

The granddads in this present study fall under the category of “voluntary sector.” Consequently, they are members of organisations where both employees and volunteers are to be found. The granddads themselves have chosen to participate in this work and their remuneration is only slightly higher than what they would have received from the unemployment insurance scheme. This relatively recent form of voluntary organisation, also known under the name of non-governmental organization (NGO), may well be much more common in the future than it is today.

4.6 Indicators of social capital

There is one qualitative study and one quantitative study from Sweden, where indicators of social capital could be extracted. The qualitative study consists of two team-teaching case studies (Boström, 1995). As explained in Chapter 6 a questionnaire was given to parents regarding their children’s school. The responses of 46 parents were analysed, from which the following three theoretical constructs emerged from this analysis:

- 1) solidarity and unity within the group promotes *co-operation* a “*safe*” *environment*, involving peace, quiet and order (i.e. norms and structure) in the classroom
- 2) when needed, the staff provide supportive help for the pupils and pupils have high self-esteem and enjoy going to school indicating *trust*
- 3) effective *communication* between teachers and parents and their children creates a well-functioning network

The results from the analysis in the team-teaching case study (Boström, 1995), may also be viewed from a social capital perspective, since, according to Coleman (1988, 1990) *co-operation*, a *safe* environment derived from *norms and structures*, *assistance* when needed, and effective *communication* are all entities of social capital.

In the quantitative study, carried out by the Research and Statistics Office of Stockholm Local Authority (Utbildningsförvaltningen, 2000a and Utbildningsförvaltningen 2000b) indicators for social capital were used, although the concept was not explicitly named. A questionnaire was used in this study in order to investigate the views of pupils with regard to the quality of schools. The report from the study was prepared in order for it to facilitate the comparison of different local community council areas, to measure the progress being made in each and also to enable action to be taken with regard to any shortcomings and to adapt the service to the requirements of the pupils. The study was carried out in two parts: one for classes 1 to 6 and one for classes 7 to 9. The items in the questionnaire were concerned with four different areas: teaching and working methods, safety and well-being, external factors, together with information and participation. It is the area of safety and well-being which is of particular interest to the present study. This area corresponds to the entities, as described above, of trust and structure and norms, the items in this area are relevant as indicators of social capital.

4.7 Critical perspectives on social capital

Schuller, Baron and Field (2000, p.38) are of the opinion that the strongest claim with regard to the concept of social capital is that its application challenges existing modes of thinking and thereby opens the way for new avenues of research. However, these authors point out that the concept of social capital is not something that ought to be accepted or rejected in any outright way. Rather the argument is that, on the one hand, any exaggerated claims for the concept ought to be avoided, such as that its application, as one single framework, would override conflicts of perspective or interest, and other social issues, while, on the other hand, one should avoid any premature dismissal of the concept, as if it were only an empty vessel, or a vintage wine in brand-new bottles. It is perhaps so that the very nature of the concept of social capital matches the spirit of the present age of uncertainty and quest. It is in this sense that the concept of social capital implies an emphasis on the importance of spirit and quality of life and the uses to which this spirit and quality of life are put.

Thus, application of the concept of social capital further underpins the values of that “soft” capital which is embodied in co-operation, the shared togetherness involved in achieving a better quality of life, through

an elevated range of spirit that is implied in doing something for others without necessarily giving much prominence to any gain for oneself.

Obviously social capital is not capital that can be bought, sold or lent, like financial capital. But nevertheless it does entail risk, such as when an organization is depleted of social capital to such an extent that employees are in great danger of suffering from burn out. In such an event, social capital is not immediately renewable or replaceable, since it cannot be purchased from outside and brought in to the organization. On the contrary, it takes a considerable length of time to build up a new stock of social capital in order for it to become available to infuse the organization and to affect the spirit and quality of life of the employees.

This is also true with regard to schools, especially with regard to schools as a learning environment for the pupils. Since this ought to be borne in mind with regard to schools in particular, the view taken in this thesis is therefore in line with Schuller *et al.* (2000, p.27) who, in more general terms, make a conventional, but nonetheless crucial, plea for an appropriate mixture of quantitative and qualitative approaches. Note should also be taken of the views of Glaser (2000) who considers there to be a weakness in research regarding social capital as there is a lack of research, both empirical and theoretical, where the focus has been on that which gives rise to social capital. Therefore, the view taken here is in full agreement with Schuller *et al.* (1998, p.38) argument that the strongest claim for social capital is the challenge it poses to existing modes of thinking and the opening up of new avenues of research.

4.8 Summary

The concept of social capital has been used by researchers from different disciplines at both the micro and macro levels. There are also a variety of views on the type of indicators that should be used to measure social capital. In the present study indicators are sought to investigate social capital in the form of co-operation, a safe environment derived from norms and structures, assistance when needed and effective communication in the classroom setting. The actors in this network are pupils, granddads and teachers.

Chapter 5

From a Structural Model to a Measurement Model

5.1 Introduction

In the first of the three parts of this chapter, a description is provided of the model that is used in the present study to examine the theoretical concepts and their hypothesized interrelationships. The second part presents the operational model, where the theoretical concepts are specified as latent factors. The measurement model is described in the final part of this chapter.

5.2 Structural model

The structural model (see Figure 5.1) is derived from the theoretical model in Figure 2.8 and elucidates the conceptual framework and its relationship to the fieldwork reported in this study. Social capital, by definition, comes about through interaction among people. The theoretical model for interactions between teacher, pupil and granddad is represented by the triangle and the intervention of a granddad in a classroom is an intergenerational interaction, as shown by the shaded cone in the conceptual framework presented previously in Figure 2.8. In this case the assumption is that social capital will be generated through the interactions of the actors in the classroom. The structural model, in Figure 5.1, denotes the chain of events describing how the intervention of a granddad in a classroom initiates a process of increasing social capital that, in turn, converts into yet further increases in social capital. The results reported in this study are restricted to one particular section, as shown in Figure. 5.2.

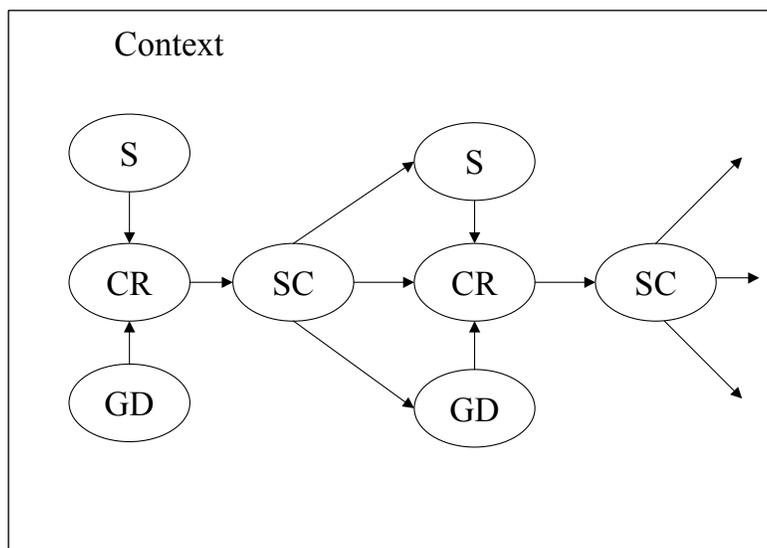


Figure 5.1 A structural model of social capital conversion
 Key: S = school, CR = classroom, GD = granddad, and SC = social capital

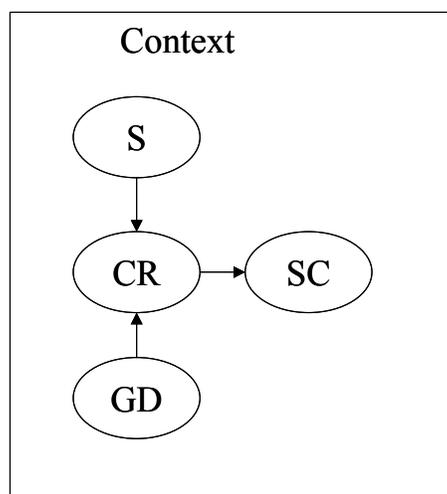


Figure 5.2 Structural model of social capital in school

It follows, from the definition of social capital, that it is derived and nurtured in social contexts where people are working together towards a common goal. Consequently, social capital invested in children, on the part of parents and other adults, is generated when people co-operate and make use of the common social capital available to them. The subject of the research reported in the present study is the classroom, where transmission of learning takes place, where pupils co-operate with each other and where the individual pupils feel secure and trust the adults present and with whom they are able to co-operate. In such a context, a granddad is able to

recognize that his presence is needed and that his role in this network is important. There is communication both between adults, the teacher and the granddad, and between pupils and granddad, pupils and teacher and between the pupils themselves. The pupils regard the adults as role models and gain experience from working together with them, as well as from the mentoring, supervision and teaching that is taking place. When this context is maximally productive, it forms a firm foundation for generating social capital in the form of trust, norms and structure, together with viable and vital communication between all participants.

The importance to parents of a school environment that is fertile with regard to social capital, has been made explicit in a recent case study (Boström, 1995). In the study there were two adults co-operating in classroom teaching. The parents' evaluation of the work of the teachers provided information as to those factors which the parents indicated they considered important to learning. Thus, parents considered social capital to be a prerequisite for a good learning environment. Similar results have been obtained in a more extensive quantitative study carried out by Stockholm

Education Authority (Utbildningsförvaltningen, 2000a; 2000b) where those factors considered to be of importance, by parents and by pupils, in determining that a school is of high quality, were those factors that represent social capital. As these studies have indicated, there is a positive relationship between learning and the level of social capital. Therefore the focus of the present study is on any increase or decrease in social capital in the classroom.

In order to transform the structural model into an applicable operational model that allows for the specification and measurement of the factors indicating social capital, the following hypothesis are proposed:

- H1. There *is* a systematic relationship between measures of granddad intervention and the social capital of pupils.
- H2. There *is* a systematic relationship between measures of granddad intervention and the social capital of the granddad.
- H3. There *is* a systematic relationship between measures of granddad intervention and the social capital of the teacher.

Culture

Culture is important for the context into which the granddad has been introduced. It is important therefore to bear in mind that the model has been designed within a Swedish cultural context and that in a global, or even European environment, a different model might well have been more appropriate. One assumption is that a granddad is a cultural entity in himself and exists only where there is a granddad intervention, which is taking place within a rather limited geographical area. Largely, the granddad phenomenon is confined to schools in the greater Stockholm area, which is relatively homogeneous. Nonetheless, a degree of variability with regard to demography and political factors may still be observed, as well as variations with regard to social and economic distributions across the different local authorities in which granddads are working.

“Positive and negative” social capital

The granddad intervention provides opportunities for increasing social capital in the classroom for the teacher, the pupils and the granddad himself. However, there is nonetheless a risk that the granddad might, instead, provide negative social capital in the classroom. To eliminate this risk, safeguards are in place in the form of precautions taken both during the preliminary planning of the granddad intervention and immediately before the granddad is introduced into the school. These are carried out by the steering group, within the voluntary association responsible for the granddads. A first aspect of these safeguarding procedures is the fact that it is the granddad himself who volunteers to work in a school. A second aspect arises because it is the school that makes the initial contact with the voluntary association responsible for the granddads. A third step is that the members of the steering group interview both the prospective granddad and the head of the school concerned, to establish that the necessary prerequisites for co-operation exist for an intervention to be approved. If this decision is positive, then the final safeguard comes into play, because the granddad intervention is initially for a trial period of only one month, after which either the school or the granddad, are at liberty to decide whether or not they wish to continue.

5.3 Operational model

According to Jöreskog (1999), most theories and models in the social sciences are “... formulated in terms of theoretical or hypothetical concepts, or constructs, or latent variables, which are not directly measurable or observable” (*ibid.*, p.15). Jöreskog also suggests that it is possible to use a number of measures to indicate these latent variables. In this study the hypothesized concepts that are suggested by the structural model are indicated in an operational model. This has been developed in order to measure the effect of the granddad intervention in the classroom.

Different factors regarding the various entities of social capital are to be found in the classroom. This is indicated by three latent variables that represent the social capital present between different actors. SC1 denotes the social capital that exists between the pupils themselves, SC2 denotes the social capital between that exists between the pupils and the granddad, SC3 denotes the social capital existing between the pupils and the teacher, whereas NS or SCNS represent that social capital existing in the classroom

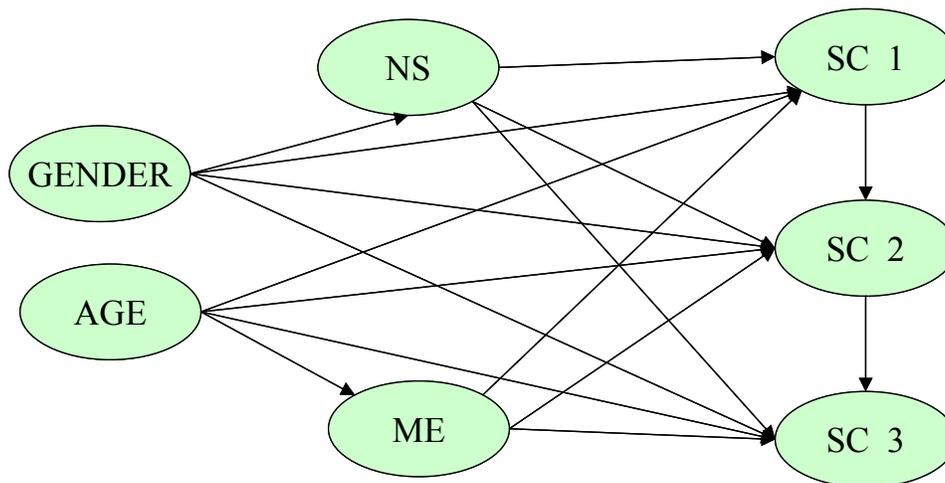


Figure 5.3 Operational model indicating latent variables

Key: SC1 = social capital between pupils, SC2 = social capital between granddad and pupils, SC3 = social capital between teacher and pupils, NS = norms and structures, ME = co-operative methods

as defined by norms and structure. Finally, there is one latent variable, ME, denoting active co-operative classroom methods. The different entities of social capital NS, SC1, SC2, and SC3 are included in this classroom-level model, together with the variable for co-operative methods. The independent variables AGE and GENDER are also included. This

operational model is shown in Figure 5.3, where possible relationships between latent variables are specified.

5.4 Measurement model

The purpose of a measurement model “... is to describe how well the observed indicators serve as a measurement for the latent variables” (Jöreskog, 1999, p.15). Measurement models are important “when one tries to measure such abstractions as people’s behaviour, attitudes, feelings and motivations” (*ibid.*, p.15).

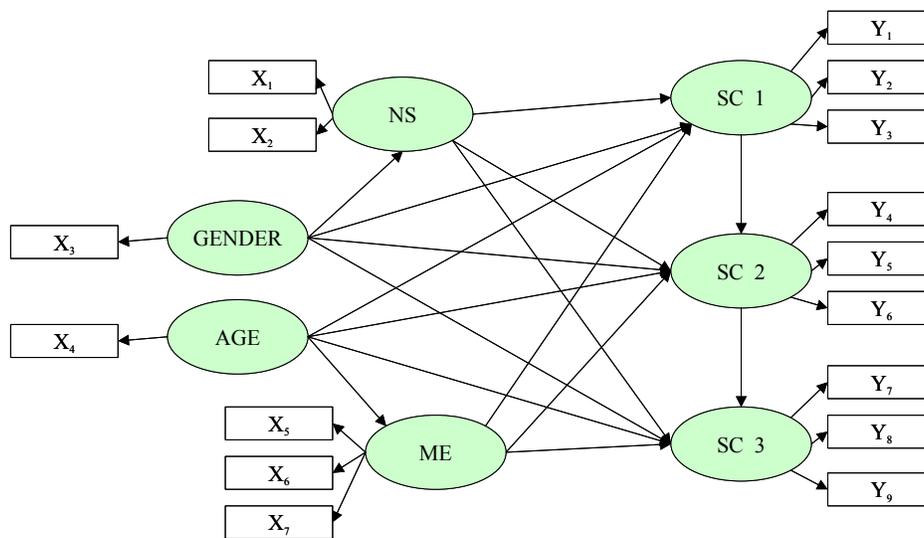


Figure 5.4 Latent variables and associated indicators
 The indicators are further developed in Chapter 8. Key: SC1 = social capital between pupils, SC2 = social capital between granddad and pupils, SC3 = social capital between teacher and pupils, NS = norms and structures, ME = co-operative methods

Therefore a measurement model, as shown in Figure 5.4, has been developed, in order to facilitate the measurement of the latent variables included in the operational model. The observed variables that indicate each specific latent variable appear in the model. Each of these is constructed and measured on the basis of responses to questions posed in a questionnaire addressed to the students studied in this investigation. Thus, it has been shown, above, how indicators have been developed, through the stages described in the three sections of this chapter, in order to be able to measure the impact of the independent variables on the dependent variable,

social capital. The purpose is to empirically test the validity of the hypotheses described above. Further details concerning the design of the research study and data collection are provided in Chapter 6.

5.5 Summary

The theoretical model, illustrated in Figure 2.8, provides the background for the structural model presented in Chapter 5. The network of co-operating actors in the classroom setting is assumed to generate increased social capital for these groups in the schools. Three hypotheses are proposed to explain this increased social capital and an operational model is developed to show the relationships between the latent variables observed in the classroom setting. Finally, a measurement model is developed to facilitate analysis of the data.

Chapter 6

Research Design and Data Collection

6.1 Introduction

Schuller *et al.* (2000) advance arguments in favour of using both qualitative and quantitative methods in the analysis of data in the field of social capital. The present study builds on the results from the analysis of both quantitative and qualitative data, whereby a quantitative method is used in the analysis of the pupil data set and a qualitative analysis is used for the narrative data set from the granddads, regarding their perception and experience of their work in the schools.

Thus, in this study both qualitative and quantitative methods are used in order to discover and understand the relationships between intergenerational interactions and social capital between the different actors in the classrooms.

6.2 Background to the methods used in the study

The aim of the study is to cover all “active” granddads, defined as those who are formally registered as having some connection with a classroom (see definition in Chapter 7) on 19 October 2000, when this study was prepared. Therefore a non-random design is considered to be appropriate as all granddads in the population are included in the research. Further, since the research was initiated after the granddads were first introduced into the schools, it has not been possible to manipulate or control any prior independent variables in order to establish whether there are any relationships with dependent variables. Kerlinger (1977) defines research such as this as *ex post facto* (from what is done afterwards), that is as “... systematic empirical inquiry in which the scientist does not have direct control of independent variables or because they are inherently not manipulable” (*ibid.*, 1977, p.379). Thus, in *ex post facto* research neither control of independent variables nor randomisation are possible, factors which constitute the main differences between this approach and experimental research. This study therefore employs a non-experimental

method, as differentiated from an experimental method, the latter being defined by Neale and Liebert as follows: “Investigations in which the variable hypothesised to have a causal influence is manipulated by the investigator are said to employ the experimental method” (1980, p.14)

The present study investigates the actual interventions of the granddads in the context of the schools. Since the applied method is both non-random and non-experimental, there are a number of recognized constraints, shared by all *ex post facto* research, that need to be considered. As described by Kerlinger (1977, p.390), these include:

Inability to manipulate independent variables

Inability to randomize

The risk of inappropriate or improper interpretation

6.3 Qualitative and quantitative methods

Qualitative research covers a broad field, as described by Denzin and Lincoln (2000):

Qualitative research is an interdisciplinary, transdisciplinary, and sometimes counter disciplinary field.... Qualitative research embraces two tensions at the same time. On the one hand, it is drawn to a broad, interpretive, postexperimental, postmodern, feminist and critical sensibility. On the other hand, it is drawn to a more narrowly defined positivist, postpositivist humanistic and naturalistic conceptions of human experience and its analysis” (*ibid.*, p. 7)

Strauss and Corbin (1990) define qualitative research as “... any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification” (1990, p.17). According to Baker (1999), in social research there are a number of different opinions regarding the relative importance of qualitative data and quantitative data. Baker (1999) goes on to state that many researchers believe that “ ... research designs which incorporate both quantitative and qualitative data and link them together are highly desirable” (*ibid.* p. 343). Through the use of both types of data knowledge in a research study may also be broadened. Bryman and Cramer (2001), when comparing quantitative methods and qualitative methods, describes, on the one hand, differences but on the other hand stresses that these differences do not constitute impenetrable

barriers. He argues that “... the degree in which behaviour versus meaning coincides with quantitative and qualitative research should not be overstated” (*ibid.*, p. 432). Neuman (2000) claims that if researchers are familiar with both styles, it is possible for them to be used in a complementary way and to broaden knowledge.

In the view of McTavisch (2002), there is a difference between quantitative and qualitative data, and quantitative and qualitative analysis of these data, whereby the research itself can take a quantitative or qualitative approach, according to the data that is used in any particular research study.

Qualitative research may be used in order to describe and illuminate the context, and the conditions, under which research is conducted (Cook and Campbell, 1979) or “... one might use qualitative data to illustrate or clarify quantitatively derived findings” (Strauss and Corbin, 1990, pp.18-19). Important side effects or unexpected outcomes of quantitative methods may be of significance to an explanation of results from qualitative research. Further, McLaughlin (1987), when claiming that the macro world of policymakers should be integrated with the micro world of individual implementation, states that “organisations don’t innovate changes – or implement – individuals do” (*ibid.*, p.174), and therefore argues for the necessity of using both macro-analysis and micro-analysis at the level of the individual.

In describing the differences between qualitative and quantitative data, Tesch (1990) adopts the approach that qualitative researchers, in their analysis, try to make sense of narrative data, where qualitative data is defined as all that data which cannot be expressed in numbers. In other words, she is referring to qualitative research in the sense where the researcher is predominantly using words as data. Further, Tesch (1990) describes two different ways in which qualitative methods deal with such words. The first of these methods is where the focus is on discovering structures in the data, either as a pattern or as a network, in the relationships between the constituent parts. Research that aims to uncover regularities, emerges from an intensive analysis of the data and shows how:

“... some scholars carve out entities from data that they regard as ‘properties’ ‘concepts’ or ‘variables’. In most cases they assume that there might be connections or relationships among them that are to be discovered. The regularities are viewed as a system of conceptual order.” (*ibid.*, p.63)

The second of these methods is to analyse meaning, through interpretation and searching for themes. When using this second method, the researcher is not looking for relationships but for commonalities across, and uniqueness within, the themes.

6.4 Structural equation modelling

Structural Equation Modelling (SEM) is used as a tool for analysing the quantitative data set established for this study because this method allows the researcher to work with non-experimental data, to construct hypotheses and to hypothetically determine relationships using sets of equations (Tuijnman, 1989; Boudard, 2001). Since the purpose is to measure social capital, variables are constructed as measures the following entities of social capital: trust, norms and structures, together with communication and co-operation between the various actors in the classroom. The results reported in prior qualitative studies and quantitative study, as described below (see 6.5), provide the foundation for the construction of the indicators in the present study, which are then subsequently used for the measurement of these entities.

After completion of the questionnaires by all the respondents concerned, the data thus collected is coded and analysed, using the Statistical Package for the Social Sciences (SPSS). On the basis of the theory described in Chapter 2, and the structural model described in Chapter 5, a factor analysis is carried out in order to uncover and select indicators for the different entities of social capital through a process of data reduction. Factor analysis, according to Bryman (2001), provides the investigator with the opportunity to determine whether any of the defined indicators for measuring a specific entity of social capital are related to each other in any way, while also ensuring that they are not at the same time measuring other entities of social capital.

The data is subsequently processed further, with regard to their range and distributional properties, using the pre-processor PRELIS, part of the software in the statistical package for Linear Structural Relations (LISREL).

6.5 Design of the studies

Three different studies are presented in this section. Study A, which is a "team-teaching study", Study B, which was carried out under the auspices of Stockholm Education Authority and Study C, the present study concerning "Granddad intervention." Study C, the present study, builds upon both Study A and Study B. Here a description is provided of these latter studies, including an explanation of their significance to Study C.

6.5.1 Study A. The Team-teaching study

Description and aim of Study A

The original title of Study A is *Immigrant Children in the Classroom; A Case Study of Team-Teaching in two Schools in Areas with a High Percentage of Immigrant Children in Gothenburg* (Boström, 1995). The research described in Study A was carried out by the present principal researcher during 1994-1995. The aim was to analyse the responses to an open-ended questionnaire administered to parents whose children were participating in two three-year periods in team-teaching projects, one in Angered (1984-1987) and one in Hisingen (1988-1991), both areas being in Gothenburg. The result of the analysis of the data from this study is re-analysed with regard to a social capital perspective by the principal researcher of the present study. Therefore this analysis is described below in order to highlight the background of the indicators that are used in measuring social capital in the present study.

Method of Study A

Qualitative analysis of data offers opportunities to carry out analyses both at the micro-level and at the macro-level, as well as providing a possible foundation for a more extensive quantitative study. This is the background to the reference above, in Chapter 4, regarding the selection of indicators for social capital. In one of the studies, study A, a qualitative method is used to analyse the responses to open-ended questions in a questionnaire administered to parents whose children were participating in two team-teaching projects. The qualitative method that was used has similarities with Grounded Theory, as described by Strauss and Corbin (1990). In their description of the analysis of data, researchers are searching for incidents by which the data can be placed into different categories, the properties of the latter being defined and conceptualised in an abstract form. Thereafter,

relationships between the different categories are investigated and conceptualised to form a theory.

In the team-teaching study, the data consisted of a limited number of questionnaires, therefore there was no possibility of gathering enough information on which to ground a theory. Instead a more general qualitative method was used to search for patterns and regularities in the responses (Tesch, 1990). The researcher is able to build on those intuitions and insights that emerge through dwelling intensely on the data over a longer period of time.

In order to compare the responses, the sentences in the responses concerned in this case were broken down into elements, describing the various opinions of the parents. The exact wording from the responses to the questionnaire were retained, in order for the parents' original opinions and content to be maintained. There were three open-ended questions, as follows:

1. Did you like to have your child in class X
2. Why/Why not?
3. We have tried a new organisation in this classroom. ... What is your opinion of this organisation?

Population in Study A

Questionnaires were distributed to the parents of pupils in two three-year periods. There were 18 completed questionnaires from the 19 distributed in the first of these two periods (response frequency 94%) and 24 completed questionnaires of the 25 distributed in the second (response frequency 96%). Thus a total of 42 completed questionnaires were available for analysis.

Data analysis in Study A

In this data analysis, a list was drawn up of all parts of sentences (segments) where the parents had mentioned something about school or team-teaching.

Table 6.1 Indicators for social capital (adapted from Boström 1995)

<i>Categories and number of segments</i>		
1	The pupils are provided with support and assistance	11
2	The pupils attain a high level of self-esteem	7
3	The pupils enjoy being in school	11
4	The pupils realize the importance of education	2
5	The pupils achieve broader knowledge	6
6	There is no "running about" between classrooms	12
7	There is order in the classroom	4
8	There is peace and quiet in the classroom	9
9	The climate in the classroom is characterised by solidarity and unity	17
10	Pleased with the teacher	13

The questionnaires were found to contain a total of 93 such segments. These were grouped under 10 categories, as shown in Table 6.1. One significant factor uncovered in the data is that all of 81 segments, out of a total of 93 in the present analysis, indicate some reference to social capital. On the basis of these segments, and the 10 categories, the following observations can be made with regard to the *social capital* perspective:

- Category nine, the climate in the classroom, was characterized by solidarity and unity (17 segments). This category is related to category six, with 12 segments, the importance of remaining in the classroom and doing things together. The combined total number of segments in these two categories constitute roughly one third of the overall total of segments, that is 29 out of 93 segment. These 29 segments are direct indicators of that entity of social capital defined as “*co-operation during solidarity and unity.*”
- That entity of social capital defined as “*norms and structure*” is observed in category seven, order in the classroom (with 4 segments), and category eight, peace and quiet in the classroom (with 9 segments). Thus there are a total of 13 segments that indicate “*norms and structure.*”
- “*Trust*” as an entity of social capital is to be found in category one, supportive help (with 11 segments) in category two, high self-esteem (with 7 segments), and category three, children enjoy going to school (with 11 segments). Thus, a total of 29 segments are found that indicate “*trust.*”

- “*Communication*” as an entity of social capital is indicated by the 13 segments in category 10, pleased with the teachers. The segments in this category refer to the importance of communication between teachers and parents and that parents feel that their children are “safe” and are working in a good environment.

Implications of Study A for Study C

The analysis above is described in order to highlight the background for the indicators that are used in measuring social capital in the present study. The implication for granddad intervention described in Study C is that it allows indicators for social capital to be established for use in the present study.

6.5.2 Study B. Stockholm Education Authority study of well-being in schools

Description and aim of Study B

Study B is a study made by the Research and Statistics Office of Stockholm and Stockholm Education Authority (Utbildningsförvaltningen, 2000a; 2000b). A questionnaire had been used in that study in order to investigate the views of pupils with regard to the quality of the physical and social environment in their schools. The study was carried out in two parts: one for classes 1 to 6 (*Skolundersökning, Skolåren 1-6*) and one for classes 7 to 9 (*Skolundersökningen, Skolåren 7-9*). The research for this study was undertaken during 1994, 1996, 1998 and 2000.

The goal was to compare the situation and current developments in various local community council areas in Stockholm Local Authority, in order to allow concrete proposals to be put forward, and incitements to be offered, to rectify any shortcomings and to adapt activities to the requirements of the pupils.

To reach this goal the study covered four areas: teaching and working methods; safety and well-being; external factors; and information and participation.

Population in Study B

A total of 42 000 pupils in compulsory schools in Stockholm Local Authority are the subject of that section of Study B which is concerned with the youngest pupils, in classes 1 to 6. Here the questionnaire was administered to a total of 22 000 parents and pupils, with a subsequent response frequency of 81%.

In the second section of Study B, the respondents were 9 400 of a total of 18 200 pupils in classes 7 to 9 in compulsory schools in Stockholm Local Authority, with a subsequent response frequency of 84%.

Method in Study B

Questionnaires were distributed to the schools. Whereas in the first section (classes 1 to 6) the questionnaires had been sent home with the pupils and completed by the parents, in the second section the pupils in classes 7 to 9 completed the questionnaires themselves in the classroom.

Results in Study B

In their responses, the parents in the first section (classes 1 to 6) stress that feeling safe and a sense of well-being are central aspects of school and that they greatly appreciate the attitude of the teachers towards the pupils in their charge.

Further, their assessment of the school is influenced by the degree of solidarity among, and the relationships between, the pupils, access to adults whom the pupils trust and the opportunities for feeling completely secure at school.

However, there is some dissatisfaction with regard to peace and quiet in the classroom. 23% of the respondents are either rather dissatisfied or very dissatisfied in this respect. In other words, Study B indicates that the situation with regard to order is an important prerequisite for it being possible for various aspects of school work to be carried out.

With regard to the older pupils (classes 7 to 9), there was some variation in the responses to the questions concerning safety and well-being. Most of them feel secure in school and appreciate the sense of solidarity among, and relationships between, the pupils in the class. However, in many instances the issue of order raised a number of difficulties – many wished to have more peace and quiet in the classroom in order to be able to do their work.

Implication of Study B for study C

It is the area of safety and well-being which is of particular interest to the present study. The items in the questionnaire in study B were concerned with four different areas and one area corresponds to the entities, as described in study A, of *trust* and *structure and norms*, the items in this area that are relevant as indicators of social capital. In study B, indicators for social capital were used, although that concept was not itself explicitly referred to in the report in question.

6.5.3 Study C. The Granddad intervention

Population in Study C

The target population for this investigation are, as stated above, all granddads working in school and attached to a particular class in a school in the greater Stockholm area. This is more fully described in Chapter 7. Consequently, the population of pupils and the population of teachers are defined as being those at the schools where there is a granddad working. In some of the schools, the teachers are working in teams, whereby more than one teacher may be designated as being in some particular classroom where the granddad is present. In other schools, there is only one teacher working in each classroom alongside the granddad.

Questionnaires in Study C

On the basis of the analysis described in Study A and Study B, and those definitions of the entities of social capital that were available (see Chapter 4), the task of developing instruments for measuring the indicators of social capital was embarked upon. Indicators are also included in the design of background variables, the duties that is has been expected the granddad will carry out, and what the granddad actually does. The indicators are developed further in the descriptive analysis of the data, in Chapter 7, and in the multivariate analysis of the data, in Chapter 8.

Four questionnaires have been constructed in order to collect the data required to be able to test the research questions and hypotheses that have been formulated. One of these questionnaires is designed to be administered to principals, one to teachers, one to the granddads, and one to the pupils. These questionnaires have been first tested in a pilot study in three schools. Following adaptations, they were then administered to a full population. The questionnaires have been tailored to the four categories of

respondents in order to boost response rates. Thus the questionnaire to be administered to principals is designed for a 10-minute completion period. It was possible for the pupil questionnaire to be completed in about half an hour. Although the questionnaires for teachers and granddads are more extensive, it is also possible for these to be completed in about 30 minutes.

Data collection for Study C

Collection of the data was carried out during March and April 2001. Between one and two schools were visited each day by the principal investigator. These visits also provided an opportunity for discussion with the various actors whereby additional information was gained in order to fill out the picture of how granddads, pupils and teachers were working together in the 17 schools concerned.

The data was collected on site at each school. The method used for the investigations carried out by Stockholm Local Authority (Utbildningsförvaltningen, 2000a; 2000b), involved parents and pupils in classes 1 to 6 completing a questionnaire together. Therefore, a similar procedure was followed by the principal investigator when administering the questionnaire to the pupils, in that the questions were gone through one by one together with the pupils, either by presenting them on an overhead or by reading them aloud. However, pupils in classes 7 to 9 completed the questionnaire with only a short introductory presentation being given, while the investigator remained in the classroom as the pupils completed the questionnaire. The teacher(s) and the granddad in each class completed the appropriate questionnaires designed for them at the same time as the pupils completed theirs. During the investigators visit, the principal also completed the appropriate questionnaire. In the event of some adult respondent not being available during the visit to complete the questionnaire, this was left behind for them to complete and return later. On the other hand, in the case of those pupils who are absent from school at the time of the data collection, they were registered as “absentees” for the purpose of the investigation.

Responses obtained in Study C

In Table 6.2, the total number of responses for each school is provided. The groups of responses for the pupils in each school are given in such a manner that total responses for each class or each group of classes in a teaching team, is identifiable. Although in one particular school, only two of the four granddads completed the questionnaire, these two respondents were more closely attached to the classes concerned than was the case with

Table 6.2 Number of respondents by category and nonresponse

School	Pupil	Pupil	Granddads	Teachers	Principals			
	response	nonresponse				Response/ nonresponse	Response/ nonresponse	
	N	N	%					
1	34			1	1			
2	42	2	5	1	3			
3	19	0	0	1	2			
4	16	8	50	1	1			
5	19	2	10	1	-1			
6	47	3	6	1	2			
7	24	5	21	1	1			
8	48	8	17	1	2			
9	21	0	0	1	1			
10	21	5	24	1	1			
11	45	0	0	1	2			
12	25	2	8	2	1			
13	27	3	11	1	1			
14	22	7	32	1	1			
15	61	2	3	1	-3			
16	23	1	4	1	1			
17	86	8	9	2	4			
Totals	580	56	10	19	24	17 %	15	11%

the two non-respondents. No data is available for teachers in two of the schools, while in two further schools, the principals concerned did not complete the questionnaire.

6.6 Data collection for the qualitative follow-up

Data collection for the qualitative follow-up was carried out in November 2001 (Boström, 2001b). The results, as shown in Table 7.10 in the report to the National Agency of Education, were discussed at a monthly meeting of the association for granddads in Stockholm. All the participating granddads at that meeting agreed to answer an open-ended questionnaire, consisting of 7 questions, regarding their work. This questionnaire was also sent to those granddads who had not been present at that particular meeting, giving a total number of responses for this data collection of 26 from a total of 41 males working as granddads in the schools, giving a response frequency of 63%. All granddads in the schools had been targeted in this data collection

in an attempt to achieve as many experienced and differentiated responses as possible.

6.7 Summary

In order to attain the greatest possible level of understanding, a qualitative method is applied in the present study, to complement the quantitative method that is used to establish and test the indicators for social capital with regard to the pupils. The qualitative method, described by Tesch (1990) as being concerned with words, is used to discover and analyse structures in the data, responses from the open-ended questions in the questionnaires. These structures might be either a pattern or a network of relationships between the various constituent parts of the data. Further presentation of the data is provided in the following three chapters. Chapter 7 is descriptive, providing both background information concerning the respondents in the study and descriptions of the observed variables regarding the granddad intervention, social capital, together with the methods used. Chapter 8 presents a multivariate analysis of the pupil data set. In Chapter 9, a description of the qualitative data analysis of the narrative data from the granddad questionnaires is to be found.

Chapter 7

Descriptive Data Analysis

7.1 Introduction

In this chapter, a descriptive analysis is undertaken regarding the data from the different questionnaires. As an explanation of the prerequisites for work in schools, a background description of the Swedish educational system is provided. The granddads' background and the population of pupils and teachers are described. Thereafter the granddad intervention, as well as social capital, as experienced by pupils, granddads and teachers, is described.

7.2 Organization of the Swedish compulsory schools

Since the early 1990s, there have been many changes in the organisation and management of schools in Sweden. In 1991 (SOU 1990-91:18) the responsibility for teachers' employment was transferred from the central state authorities to local authorities. A new curriculum was implemented during 1995. It was confirmed that the central state authorities had responsibility for setting the goals for education but that the plans, the means and the methods of reaching these goals, were now to be delegated to the local authorities and individual schools. Each and every local authority is expected to draw up their own school plan.

In 1998, the statutory provisions concerning childcare were transferred from the Social Service Act to the Education Act. As a result of this, the statutory responsibilities were transferred from The National Board of Health and Welfare to the National Agency for Education. This facilitated the implementation of a provision from 1997, which states that staff from primary school, pre-school and after-school care should cooperate in order to ensure that the education of children will be regarded as part of lifelong learning. Subsequent integration of childcare and school would be facilitated when responsibility was placed under the same form of educational management (Regeringens proposition 1997-89:93; Boström,

1999). Accordingly, the duties placed on the school head were also changed (Boström, 2000b). The results from a survey carried out by the National Agency for Education in 1998 indicate that 76 per cent of the heads of compulsory schools are responsible for pre-school classes, while 80 per cent are responsible for after-school centers and 23 per cent are responsible for pre-school, (care for children between 0-5 years of age). This means that compulsory schools in Sweden have been, and continue to be, in a period of transition. Since decisions regard the means of attaining designated goals are delegated to local authorities and individual schools, some variation between schools is to be found both with regards to methods and to organization. In short, on the one hand, there are, for example, schools where teachers are working together in teams of about 5-8 staff, teaching 60 to 80 pupils, and, on the other hand, schools where there is one classroom and one teacher for each class/year. In addition, many different variations are to be found between these two poles. There are also differences in the manner in which pupils are grouped. Schools have either classes with mixed age groups, for example, class 1-3 in one classroom, or classes consisting of pupils in the same age group. The official statistics about childcare, schools and adult education published by the National Agency for Education (Skolverket, 2001) indicate that for all the 289 local authorities found in Sweden, the total number of compulsory schools is 5090. Of these, 418 are private schools. There is a total of 1 008 694 pupils in these schools, with the mean number of pupils being 207 per school. The local authority with the highest mean number of pupils per school is 420 while the lowest mean is 56 pupils per school. There are a total of 5 301 heads within these schools, of which 2 130 are males and 3 745 females.

7.3 The schools investigated in the Stockholm area

A total of 17 schools participated in the research reported here. All are located within the greater Stockholm area. As mentioned above, there are now considerable variations in the manner in which individual compulsory schools in Sweden are organized, a consequence of the decentralization policies that have been implemented recently. The total number of pupils in each of these 17 schools varied between 120 and 923. Therefore the number of individual classes in each school varied from 6 to 39 and the number of classrooms ranged from 9 to 70. The age-range of the pupils in

Table 7.1 Differences between the schools participating in the study

School	Number of pupils	School area	Number of rooms	Number of grades	Pupil age range	Percentage immigrant	Number of girls	Number of boys	Total staff	Number of women
1	377		29	27	06 – 12	98	184	193	61	51
2										
3	370	5800			06- 12	55	180	190	70	45
4					06 – 11	87			23	18
5										
6	295		12	10	06 – 12	5	153	143	45	40
7	470	3000	40	19	06 –12	23			55	43
8	735	8000	34	30	06 –16	20	380	357	90	67
9	120			6	05 –12	60	55	65	18	15
10	923	8495		39	06 –12	10	455	468	160	136
11										
12										
13	500	5000	70	21	00 –09	43			85	60
14	795			38	06 – 16	15	400	385	105	85
15	401		20	16	06 – 12		202	184	65	53
16	609	8358	40	28	06 – 12	30	285	324	85	74
17	423		40	19	13 – 16	53	190	233	75	46

these schools was between 0 and 16 years. With regard to pupils with an immigrant background (defined as where at least one parent speaks a language other than Swedish in the home), the proportion of the total school population varied from 5% to 98%. The total numbers of staff employed in each school varied between 18 to 160. An overview of these features of the schools participating in this research is provided in Table 7.1. This overview illustrates the salient features of the differences with regard to organisation and the context of these schools against the backdrop of compulsory schools in general in Sweden. In order to fill-out the picture provided by this overview, the background and previous experience of the head of each of these schools is outlined in Table 7.2, as an additional source of variability.

Table 7.2 The background and experience of the principals

School	Gender	Age	Education level	Work as	Principal in this school
1	Man	36 - 45	Teachers college	teacher 4-9	1 – 5 years
2					
3	Man	45 - 55	University	other	1 – 5 years
4	Woman	46 - 55	Other	other	1 – 5 years
5	Woman	46 - 55	University	teacher 4-9	1 – 5 years
6	Woman	46 - 55	University	teacher 4-9	1 – 5 years
7	Woman	56 - 65	University	teacher 4-9	6 - 10 years
8	Woman	56 - 65	University	teacher 4-9	< 10 years
9	Woman	46 - 55	Teachers college	other	1 – 5 years
10	Woman	36 - 45	Teachers college	teacher 1-3	> 1 year
11					
12	Man	46 - 55	University	teacher 1-3	6 - 10 years
13	Woman	46 - 55	Teachers college	other	6 - 10 years
14	Woman	46 - 55	University	teacher 4-9	1 – 5 years
15	Woman	46 - 55	Teachers college	teacher 1-3	> 1 year
16	Woman	56 - 65	University	teacher 1-3	1 – 5 years
17	Woman	46 - 55	University	teacher 4-9	1 – 5 years

7.4 Portrait of Stockholm classrooms

As stated above, the schools in the decentralised Swedish school system are not uniform. Thus it is now possible to find, in the Swedish school system, that there are teachers working in teams with other teachers, each teacher working in a number of different classrooms with any number of pupils or the more traditional system where a single teacher works in one classroom with one class of age-grouped pupils. In this study, the classroom itself is regarded as a practical concept to denote people working in a group, specifically, in this context, consisting of adults and a defined group of pupils. The changes in the total number of teachers working in classrooms in Sweden is described in the official statistics published by the National Agency for Education (Skolverket, 2001). Here, developments with regard to the teacher: pupil ratio, between 1994-95 and 2000-2001, is to be found. In relative terms, this ratio has changed from 8.1 teachers per 100 pupils to 7.6 teachers per 100 pupils. In real terms, the total number of teachers in the country as a whole has increased from 87 472 in 1994-95 to 97 884 in 2000-2001. There are, however, differences between local authorities. Thus the ratio 7.6 teachers per 100 pupils is the mean for all local authorities in Sweden. This may be compared with the ratio of 8.2 per 100 pupils in large urban areas, 8.4 per 100 in rural area and 7.4 per 100 in suburban areas

(defined as those dormitory areas where more than 50% of the population travel to work in some other local authority, usually a large urban one). There were a total of 89 814 teachers working in compulsory schools in Sweden during the school year 2000-2001, of which 23 983 were males and 65 831 females.

7.5 Statistical descriptions of granddads

The granddads have a variety of different backgrounds and have worked in diverse occupations before starting their present work in the schools. In fact no two of these nineteen men have the same background. Therefore all their different previous occupations are listed here:

Engineering salesperson, technician working with draft beer, maintenance technician, finance manager, self-employed, welder and metal-worker, employee in a social welfare department, municipal architect, employee in construction industry, bank manager, surveyor, office caretaker, chef, scenographer, painter, sales assistant, chimney-sweep, senior police officer, mayor.

Two of them had learned of the idea of working as a granddad through a newspaper and fifteen of them had been informed about this opportunity by the local employment office. In addition, the granddad association had contacted another potential granddad. The youngest of the granddads is 52 years of age and the oldest 62 years old. Seven of them were 57 years of age and the remainder were evenly spread over the other ages. In addition, there are variations in the amount of experience they have each gained since they began working as granddads for different lengths of time, as shown in Table 7.3.

Table 7.3 Length of experience of work as a granddad

Experience of work as granddad	
	Frequency
0-5 months	2
6-12 months	8
13-18 months	3
19-24 months	6
Total	19

7.6 Statistical descriptions of teachers

The group of teachers who participated in this research consisted of twenty females and four males. The reasons provided by each teacher as to how it came about that a granddad had become involved in their particular classroom are as follows: three of the teachers had been contacted by the granddad association, one came up with the suggestion on her own initiative, two had read about the granddad projects in newspapers while eleven of them had been approached by the principal of the school with the suggestion that a granddad work in their classrooms. Most of the teachers are relatively young, seventeen of them being under 45 years of age (see Table 7.4). Thirteen of them are graduates of teacher-training collages, six are university graduates and four had completed other forms of higher education.

Table 7.4 Age of teachers included in the study

Age of teachers	Frequency
25-35	10
36-45	7
46-55	6
56-65	1
Total	24
Missing	3
Total	27

7.7 Statistical descriptions of pupils

Information concerning the pupil population is presented in two tables, below. In Table 7.5, the pupil population is presented according to gender, together with the pupils who were absent or with spoiled questionnaire. The absent pupils are those who were not present in the classroom when the questionnaire session was taking place. The questionnaires that are spoiled concern the responses of two pupils where the questionnaire has been completed in such a manner that it has not been possible to include them in the data analysis.

Table. 7.5 Number of boys and girls

Boys or Girls	Frequency	Per cent
	Boys	275
Girls	249	43
Total	524	90
Spoiled	2	0
Absent	54	9
Total	56	10
Total	580	100

The effects of the decentralization of the school system in Sweden is also apparent in the pattern of distribution of pupils across classes that are organized in a variety of ways in the different schools. Thus, it can be seen in Table 7.6 how age differentials among the pupils are distributed across the seventeen schools. The pupils had been requested to state their actual age on the date they participated in the questionnaire session, give or take a week. In some of the schools, two or three age groups are taught at the same time in the same classroom. Therefore, in school 10, for example, there are pupils from seven to ten years of age attending the same class. In Table 7.6, the total number of pupils in each school is to be found on the bottom line (total) and the age distribution for all pupils in the population is to be found in the last column on the right.

Table 7.6 Age and number of pupils in the classrooms and schools

	Name of school																	Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
Age of pupils	7									3								3
	8		1					17		3	13					12		46
	9		8	5	6			7		5	25	16				10		82
	10		9	3	10	6	1	15		5	7	7			11			74
	11	1	18			1	17	13	8	3					32			93
	12	21	12				18	5		14			14		16		11	111
	13	11	10				3			2			7				22	55
	14	1								1			1	6			11	20
	15														9		21	30
	16																9	9
Total	34	40	18	8	17	44	19	47	20*	16	45	23	22	15	59	22	74	523

*One girl in this school did not give her age (grade six)

7.8 The questionnaires and the variables measuring the granddad intervention

Over and above the questions regarding background variables, the questionnaires contained questions concerning the granddad intervention itself, the granddad's presence and the type of duties he carried out (see Table 7.10) together with the social capital generated in the classroom between the different actors. Similar questions were posed to pupils, granddads and teachers. Regarding the duties of the granddad, the granddads and the teachers were asked about their expectations and the actual practical outcomes of the work.

The points of view of the adults, as indicated in their responses to the questions in the section of the questionnaire concerning the presence of the granddads in school and their duties, are presented in Table 7.11 and Table 7.12.

Observed variables regarding the granddad intervention

The following observed variables are used to investigate the granddad intervention (see Table 7.7). The first four variables indicate the presence of the granddad. The remaining twelve variables indicate his different tasks in the school.

Table 7.7 Granddad intervention variables

GIJOCLE;	granddad is present in the classroom
GIJOBRE;	is present during the breaks
GIJOLUE;	is present in the dining hall
GIJOEXE;	is present when the pupils are on school trips outside school
GIJOADE;	is helping everyone
GIJOSOE;	is resolving conflicts
GIJODIE;	prevents violence by being present
GIJONSE;	imposes restrictions
GIJOASE;	assists the teacher with teaching
GIJOSTE;	provides support for a "disruptive" pupil
GIJOOSE;	supports "disruptive" pupil
GIJOHEE;	helps pupils in different subjects
GIJOCOE;	talks and comforts
GIJOTAE;	relates his own experiences
GIJOUSE;	makes use of his own experience
GIJOGEE;	takes care of a group of pupils

Indicators of social capital

Social capital between the pupils is investigated through indicators for the different entities of social capital. Co-operation between pupils and adults, together with norms and structures, as indicated by the existence of order and rules, and a quiet working environment, are two of the entities. There are also indicators for trust, measured by the extent to which pupils feel safe and the degree to which pupils are provided with mutual support and support from the adults in the classroom. There are also indicators for communication between the different actors (see Table 7.8)

Table 7.8 Social capital networks in the classroom

SCNSSEE;	co-operation between pupils* within the classroom
SCNSFPE;	co-operation between boys and girls
SCNSSRE;	co-operation between pupils during breaks
SCNSORE;	order and rules in the classroom*
SCNSLAE;	quiet and pleasant working environment*
SCTRGDE;	being provided with individual support and assistance from the granddad
SCTRLAE;	being provided with individual support and assistance from the teacher
SCTRKAE;	being provided with individual support and assistance from another pupil
SCTRETE;	pupils feeling completely safe in school*
SCTRFPE;	boys and girls have equal opportunities*
SCCOLDE;	able to discuss with teachers
SCTRKPE;	talk with another pupil when there is a problem
SCTRLPE;	talk with the teacher when there is a problem
SCTRMOE;	talk with the granddad when there is a problem

*Questions used in a study made by the Research and Statistics Office of Stockholm Local Authority (2000a and 2000b)

Those variables in Table 7.8 that are marked with an asterix are the ones that were also used in *Skolundersökning skolåren 1-6 and 7-9* (Utbildningsförvaltningen, 2000a and 2000b). In the latter case, these questions were given to 22 000 students in classes one to six and 18 200 students in classes seven to nine. Of these variables used in the Stockholm questionnaire, norms and structures are indicated by two observed variables, SCNSORE, order and rules in the classroom, and SCNSLAE, a quiet and pleasant working environment. Trust is indicated by SCTRETE, if pupils feel completely safe at school. One question also concerned co-operation between pupils.

These variables, having been further developed, are used in the present study as indicators to measure social capital. However, it is preferable to have several different indicators for each of the entities of social capital. Therefore, more specific variables have been included for

co-operation, indicating co-operation between pupils both in the classroom (SCNSSEE) and during breaks (SCNSSRE) and co-operation between boys and girls (SCNSFPE). The latter variable also complements the gender variable (SCTRFPE). Being provided with individual support and assistance is important for the pupils and an indicator for the social entity of trust. Therefore, in this context, three variables are included, trust for the granddad (SCTRGDE), trust for the teacher (SCTRLAE) and trust between individual pupils (SCTRKAE). Opportunities for talking with someone, when a pupil is experiencing difficulties, are also an indicator of communication and trust. Talking with the granddad (SCTRMOE), talking with the teacher (SCTRLPE) and talking to a peer (SCTRKPE) are the variables that are included to indicate communication in the classroom. There is also one further variable regarding communication between teacher and pupil, discussion with the teacher (SCCOLDE), included in this list of variables.

Social capital indicators referring to the various entities between pupils are labeled SC1 (SCNSSEE, SCNSFPE, SCNSSRE, SCTRKAE, SCTRFPE, SCTRKPE), social capital indicators referring to the various entities between pupils and the granddad are labeled SC2 (SCTRGDE, SCTRMOE) and social capital indicators referring to the various entities between pupils and the teacher are labeled SC3 (SCTRLAE, SCCOLDE, SCTRLPE).

Observed variables regarding teaching methods

With regard to teaching methods, the following variables are used (see Table 7.9). These indicate two different kinds of method. One of these is that mainly administered by the teacher, including SCMENLE, SCMENFE and SCMENAE. The other is the opportunities that are provided for co-operation between pupils and consists of SCMECPE, SCMECEE and SCMECRE, adapted from the International Association for the Evaluation of Educational Achievement (IEA).

Table 7.9 Variables measuring teaching methods

SCMENLE;	the teacher determines what is to be learned*
SCMECPE;	working with projects outside school*
SCMECEE;	working on themes in groups*
SCMECRE;	participating in plays*
SCMENFE;	the teacher asks questions and the pupils answer*
SCMENAE;	the teacher talks and the pupils take notes*

*Questions used in the IEA civic education study (Skolverket, 2000b)

7.9 The views of the pupils

The views of the pupils with regard to the granddad and his various duties are presented in Table 7.10. The mean and the standard deviation for each question are presented both for the total pupil population and for boys and girls separately. The questions were to be answered by choosing one of the following response choices: (1) never, (2) sometimes, (3) often and (4) always. The numbers in front of the question themselves indicate their order in the pupil questionnaire.

Particular attention is drawn to questions 5, 6, 7, 8, 12 and 13. The responses to these questions indicate that in the view of the pupils, the granddad is of help to them, that he resolves conflicts, that he imposes restrictions, that he assists pupils in the different subjects and that he talks to, and comforts, pupils. They also indicate that the presence of the granddad prevents violence from occurring. It is to be noted that, with regard to three of the observed indicators, there are some significant differences between the responses of the boys and those of the girls. The boys feel that the granddad prevents violence occurring and that they do not feel they have to start fights or be disruptive when the granddad is present. The responses of the boys also indicate that a disruptive pupil (a pupil who talks in class and shows concentration problems when doing school work) is better able to concentrate on schoolwork when the granddad is by his side and providing supports. Further, the boys, to a greater extent than the girls, make use of opportunities to talk to the granddad when any difficulties arise.

Table 7.10 Questions measuring the duties of the granddad.

Variable	Question number:	All			Girls			Boys		
		N	Mean	Std.	N	Mean	Std.	N	Mean	Std.
GIJOCLE	1. He is present in the classroom	518	2.65	0.76	247	2.61	0.72	271	2.67	0.79
GIJOBRE	2 He is with the children during breaks	517	2.3	0.9	248	2.32	0.90	269	2.28	0.90
GIJOLUE	3 He is in the dining hall at lunch	516	2.66	1.01	245	2.64	1.02	271	2.67	1.01
GIJOEXE	4 He accompanies children and teacher on excursions outside the school	511	2.56	1.01	244	2.49	0.98	267	2.62	1.03
GIJOADE	5 He is helping everyone	515	3.24	0.85	245	3.21	0.90	270	3.27	0.81
GIJOSOE	6 He is resolving conflicts	519	2.9	0.88	246	2.81	0.89	273	2.99	0.88
GIJODIE	7 He stops violence by his presence	517	2.75	0.95	244	2.59	0.93	273	2.90*	0.95
GIJONSE	8 He imposes restrictions	512	2.85	0.91	243	2.90	0.93	269	2.81	0.89
GIJOASE	9 He assists the teacher	513	2.76	0.97	242	2.78	1.00	271	2.75	0.96
GIJOSTE	10 He is taking care of "disruptive" pupils	513	2.7	0.98	244	2.65	0.99	269	2.75	0.96
GIJOOSE	11 He is taking care of an individual "disruptive" pupil	511	2.53	0.99	240	2.40	0.98	271	2.65*	0.98
GIJOHEE	12 He is helping pupils in various subjects	518	2.94	0.94	246	2.88	0.97	272	2.99	0.93
GIJOCOE	13 He is talking to and comforting pupils	511	2.8	1.02	243	2.79	1.06	268	2.82*	0.97
GIJOUSE	14 He uses his own experiences from previous occupations	488	2.23	0.99	224	2.30	0.99	264	2.30	1.02
GIJOTAE	15 He talks about his experiences from earlier occupations	492	2.39	1.03	242	2.15	0.95	250	2.48	1.06
GIJOGEE	16 He takes care of a group of pupils	505	2.34	0.95	239	2.28	0.98	266	2.41	0.94

* Significant differences between the responses of the boys those of the girls with a significance level of 0.05

7.10 The views of the teachers and the granddads

The data from the responses of the adults regarding the presence and duties of the granddad are presented in Table 7.11 and Table 7.12 Both the granddads and the teachers were asked about their expectations and the practical outcome of the work of the granddads. In general, both the granddads and the teachers had entertained high expectations, and any differences between the two groups appear to be concerned with the relative frequency of the responses (3) often and (4) always. One interesting question concerns the presence or otherwise of the granddad in the dining hall. Four of the granddads obviously did not expect this to be

Table 7.11 Presence of the granddad, expectations and realities
Key: (1) never, (2) sometimes, (3) often (4) always

	N=19 granddad expectations	N=19 grandad realities	N=22 teacher expectations	N=23 teacher realities
present in the classroom				
1	0	0	0	1
2	1	2	8	2
3	12	8	8	16
4	6	9	4	4
present during breaks				
1	0	0	0	1
2	5	7	4	2
3	9	5	12	16
4	4	7	6	4
present in dining hall				
1	4	0	1	1
2	8	3	0	3
3	6	5	12	8
4	0	11	9	11
excursions outside school				
1	0	0	0	0
2	4	6	1	5
3	6	7	11	12
4	9	6	10	6
adult support for students				
1	0	0	0	0
2	2	3	0	1
3	6	8	6	10
4	11	8	16	12

part of their duties, a further eight thought there attendance might be appropriate sometimes, and yet eleven granddads have ended up always

being in attendance and having lunch together with the pupil in the dining hall. Most of the granddads take part in a variety of different activities in the school. They participate in the classroom, they are present during breaks, and they have lunch together with the pupils in the dining hall. They also frequently take part in excursions outside of the school, together with the teachers and pupils.

Table 7.12 The work of the granddads, expectations and realities
Key: (1) never, (2) sometimes, (3) often (4) always

	N=19 granddad expectations	N=19 granddad reality	N=22 teacher expectations	N=23 teacher reality
resolves conflicts				
1	0	0	0	2
2	3	5	10	7
3	12	10	11	12
4	3	4	1	2
presence prevents violence from occurring				
1	0	0	0	1
2	4	3	6	4
3	11	13	12	15
4	4	3	4	3
imposes restrictions				
1	0	0	0	1
2	5	6	7	5
3	8	7	8	10
4	4	5	7	7
helping a disruptive pupil				
1	2	1	2	4
2	7	6	10	10
3	8	9	8	7
4	0	2	2	2
talking and comforting				
1	0	1	1	0
2	5	5	9	6
3	10	7	10	15
4	4	6	2	2

Teachers and granddads responses to the questions concerning the perceived importance of the work of the granddad are presented in Table 7.12 The responses to the question regarding the presence of the granddad preventing violence from occurring indicate that neither the granddads nor

the teachers had quite expected this would have such a significant an impact. Only one teacher in the whole group felt that the presence of the granddad never prevented violence from occurring.

From the point of view of the teachers, the granddad talk to, and comfort, pupils to a greater extent than they themselves had expected he would, while the granddads, on the other hand, obviously do not feel that they talk to, and comfort, the pupils to the extent they themselves had expected they would.

7.11 Co-operation between granddads and teachers

Both the teachers and the granddads were asked how they perceived the assistance and support they received from each other. As may be seen from Table 7.13, their responses indicate that they feel that they do receive assistance, the granddads being a little more positive than the teachers with regard to the help they are given. The responses to these questions are given on a five-point scale, as follows: (1) very dissatisfied (2) rather dissatisfied, (3) neither...nor, (4) rather satisfied and (5) very satisfied.

Table 7.13 Mutual assistance given by teachers and granddads
Key: (1) very dissatisfied (2) rather dissatisfied, (3) neither...nor, (4) rather satisfied and (5) very satisfied

Assistance from granddad		Assistance from teacher	
	Frequency		Frequency
	2	3	2
	3	4	5
	4	5	12
	5	Total	19
Total	23	Missing	0
Missing	3	Total	19
Total	26		

Both granddads and teachers were also asked to respond to questions concerning the prerequisites for co-operation and discussions about their work.

From the teachers point of view, they feel that these discussions are held as when they are needed, which was sometimes during lessons, sometimes during breaks and sometimes in the team meetings. The granddads are also of the opinion that these discussions are held as and when they are needed. According to the granddads, these discussions are

mostly concerned with matters that had worked well, or otherwise, or the contents of the teaching, or who was to do what, or about individual pupils. The teachers were of the same opinion as to the most frequent subjects taken up in discussions between the adults in the classroom.

7.12 Social capital, opinions of the pupils

No differences with regard to boys and girls appear in the pupil responses to the questions concerning the variables, as indicators for social capital, for co-operation between pupils. This is the case with regard to co-operation in the classroom, co-operation during breaks and co-operation between boys and girls. The pupil responses also indicate that boys and girls have equal opportunities in school and feel equally safe there.

However, analysis of the data from the pupil population indicates that the responses do display some differences between boys and girls with regard to feelings of trust and having the opportunity to confide in a friend when a pupil is experiencing difficulties. The girls confide in friends to a great extent than do boys when experiencing difficulties, while the boys tend to talk more than the girls to an adult, either the teacher or the granddad. The responses to the questions concerning the gender variables, co-operation between boys and girls and girls and boys, together with equal opportunities in school, do not indicate any differences between the boys and the girls. However, the responses indicate that there is a significant difference between the girls and boys with regard to individual support from the teacher, which occurs to a greater extent for girls than it does for boys, although the responses from the pupil population as a whole still indicate that they consider they have ample opportunities for receiving individual support and assistance from the teacher.

The responses indicate that the pupils, both boys and girls, consider they have ample opportunities to discuss different subjects with the teacher. The standard deviation indicates that differences between individual schools are greater than differences between boys and girls as a whole, with regard to adherence to rules and order in the classroom and a quiet and pleasant environment.

The responses indicate that all pupils appreciate the individual assistance and support they receive from the teacher, although the appreciation is greater among the girls. The girls are also satisfied with their opportunities to talk to a fellow pupil when experiencing difficulties and for support and assistance from other pupils, whereas the boys are

more likely to talk to the teacher or the granddad when experiencing difficulties rather than talking to a peer.

Table. 7.14 Indicators for social capital for boys and girls

Key: (1) very dissatisfied (2) rather dissatisfied, (3) neither...nor, (4) rather satisfied and (5) very satisfied

Variable	Descriptive Statistics	All			Boys			Girls		
		N	Mean	Std.	N	Mean	Std.	N	Mean	Std.
SCNSSEE	Co-operation between pupils in the classroom	503	3.98	1.02	263	3.95	1.03	240	4.00	1.01
SCNSFPE	Co-operation between boys and girls	505	3.62	1.14	265	3.65	1.13	240	3.60	1.15
SCNSSRE	Co-operation between pupils during breaks	498	4.08	1.00	260	4.12	0.97	238	4.06	1.00
SCNSORE	Order and rules in the classroom	501	3.36	1.19	262	3.44	1.15	239	3.27	1.24
SCNSLAE	Quiet and pleasant environment	500	3.06	1.29	260	3.14	1.29	240	3.00	1.32
SCTRGDE	Individual assistance and support from granddad	511	3.86	1.14	266	3.81	1.11	245	3.93	1.14
SCTRLAE	Individual assistances and support from teacher	497	4.22	0.94	258	4.16	0.96	239	4.31*	0.90
SCTRKAE	Support from another pupil	498	3.96	1.00	260	3.80	1.05	238	4.14*	0.91
SCTRETE	Pupil feeling completely safe in school	500	3.94	1.08	260	3.93	1.07	240	3.97	1.09
SCTRFPE	Girls and boys equal opportunities	506	3.94	1.00	265	3.94	0.96	241	3.95	1.03
SCCOLDE	Discuss with teachers	502	4.00	1.02	263	4.0	0.98	239	4.01	1.04
SCTRKPE	Talk to another pupil when there is a difficulty	511	4.12	0.99	266	3.92	1.07	245	4.35*	0.81
SCTRLPE	Talk to the teacher when there is a difficulty	506	3.90	1.10	261	3.94*	0.98	245	3.86	1.20
SCTRMOE	Talk to granddad when there is a difficulty	511	3.53	1.25	266	3.71*	1.15	245	3.36	1.33

* Significant difference between boys and girls at a significance level of 0.05%

7.12 The views of the teachers and the granddads

The teachers consider (see Table 7.15) that the opportunities available to them to provide individual assistance to pupils as being rather unsatisfactory. The granddads, on the other hand, are rather satisfied with the opportunities available to them for providing individual assistance.

Table 7.15 Teachers, and granddads views of network involving pupils
 Key: (1) very dissatisfied (2) rather dissatisfied, (3) neither...nor, (4) rather satisfied, and (5) very satisfied

	granddad N=19	teacher N=23
co-operation between pupils during breaks		
1	0	1
2	3	3
3	2	3
4	10	11
5	3	5
co-operation between pupils in the classroom		
1	0	2
2	2	3
3	1	4
4	13	7
5	2	7
opportunities for providing individual support		
1	1	0
2	0	14
3	1	5
4	13	5
5	4	0
pupils feeling safe in school		
1	1	0
2	1	3
3	5	4
4	7	13
5	5	3

There are some differences between the views expressed by the teachers and the granddads regarding co-operation between pupils in the classroom. The responses of the teachers are less positive about this than are those of the granddads. The reason for this could be that teachers and granddads have developed various interpretations of what constitutes co-operation, based on the different goals they have for their work. While the teacher is primarily responsible for teaching, the granddad is primarily responsible for taking care of social co-operation between pupils and thus they have different aims for their work.

7.13 Support network for granddad intervention

Six questions in the granddad questionnaire are concerned with the extent to which they feel satisfied with the information and support they receive from the school and the granddad association. The responses to three of these questions consist of a scale from one to five; (1) very dissatisfied, (2) rather dissatisfied (3) neither...nor, (4) rather satisfied and (5) very satisfied. The responses to the question as to whether they are satisfied with the information about the school that was made available to them, twelve granddads indicate that they are (4) rather satisfied, while five are (5) very satisfied and two responded with (3) neither...nor.

A similar response scale is used for the questions concerning the work of the steering group of the granddad association in providing the granddad with information and assistance. Fifteen of the granddads indicate that they are (5) very satisfied with the information from the association, three (4) rather satisfied, one (3) neither...nor and for one there is no response. With regard to the assistance provided by the granddad association, of those granddads who provided responses, eleven indicate that they are (5) very satisfied and five (3) neither...nor.

Three of the questions to the granddads were open-ended, in order to investigate the nature of the contacts between the granddads and the granddad association, how often these contacts took place and the extent to which they considered them to be sufficient or whether they would prefer to have more or less contact. The responses from seventeen of the granddads indicate that they feel that the monthly meeting provides them with sufficient contact with the granddad association. Five of them use the telephone if additional contact is needed and a further six also participated in a weekly training course arranged by the granddad association. One of the granddads expresses the view that he does not feel he requires any contact at all, while a further two state that they have more regular contact with the granddad association, either on a daily or a weekly basis. Most of the responses indicate that the granddads consider they have a sufficient amount of contact with the granddad association, but should further contact be necessary, they are free to make use of the telephone. However, the response from one of the granddads indicates a desire for more training while that of another expresses a desire that the granddad association visit him in the school.

7.14 Teachers' views on the granddad initiative

Thirteen of the twenty-four teacher respondents added comments at the end of the questionnaire. One teacher added negative comments, writing that granddads working in classes is not what schools in Sweden require.

Another teacher added comments that were more mixed, both negative and positive, writing: "I believe it is difficult to know what the granddad wishes to do since he is not entirely open in stating clearly what he wishes to do. I think having a granddad is OK, but we must meet halfway. But then this leads to a difficult "clash of cultures." Staff/granddad granddad/pupils. But these difficulties I consider to be more in the nature of a challenge, nothing is impossible."

In the comments made by four of the teachers, they explained that which is important is that there are then two adults in the classroom, which prevents violence, resolves conflicts and provides support for both the pupils and the teacher.

In the comments of six of the remaining teachers, they explained in positive terms that they are in favour of there being a granddad in the school. One of them wrote as follows:

"I am very happy with our granddad. He has a fantastic and extensive background, experience and education. He is a very good role model for the pupils and they respect and like him very much. He assists in the teaching by sharing his knowledge, by taking a group of bright pupils in English and by helping pupils during lessons. Furthermore, he supports me as a teacher by giving me encouragement and ideas, by correcting the pupils' work and the national tests. He is more than willing to discuss events in the classroom, how we might proceed etc. It feels as if we form a team. Fantastic support from a fantastic person".

7.15 Summary

Although, with regard to earlier occupations, the granddads have a variety of different experience, they have one common denominator in that now they are all working explicitly for the benefit of the pupils. This intergenerational intervention is important for both girls and boys. They feel that the granddad helps everyone. However, there is evidence of some differences between the boys and the girls in the sense that the responses of the boys indicate that they consider the granddad to be important because

his presence prevents violence from occurring, because of the support and assistance he provides to disruptive pupils and because he comforts and talks to any pupil experiencing difficulties.

The questionnaires for the granddads and for the teachers contain the same questions. In addition, they are asked about their expectations with regard to the granddad intervention and the subsequent results of that intervention. In their responses, a tendency can be seen whereby both the granddads themselves and the teachers had to some extent expected the outcome that the presence of a granddad would prevent violence from occurring. However, the granddads state that they had not expected to be present to the extent they are, participating as they do now during lunchtime in the dinner halls. The granddads do not feel that they talk to the pupils or support them as much as they would wish, although the responses of the teachers indicate that they feel the granddad supports and comforts the pupils to a greater extent than they had expected.

The responses would appear to indicate the generation of social capital in the classrooms. The social capital of the granddads, as indicated in the responses to the questionnaires, would appear to be quite good. The granddads indicate that they appreciate the help and support they are given by the teachers and by the granddad association, being given the opportunity, to some considerable extent, to have discussions about their work with the teachers, which indicates the existence of good communication. The granddad is able to perceive more opportunities for co-operation between the pupils than is the teacher. This might be a result of the fact that the granddad spends some of his time with the pupils during breaks and lunchtime.

The responses of the teachers indicate that they appreciate the assistance provided by the granddads, although one of them would appear to feel other forms of assistance are required in schools. It is also interesting to recall the dissatisfaction expressed by the teachers with regard to the limited opportunities they have themselves to provide individual support to the pupils. On the other hand, the responses from the pupil population indicate that they really appreciate that individual support which they do receive from the teachers.

The responses from both the teachers and the granddads underestimate the importance of their own work, compared to the views expressed in the responses from the pupils who state that they appreciate the work of the adults exactly because of the individual assistance and support with which they are provided in the classrooms. The cause of this discrepancy might be the negative tendencies in public opinion regarding

schools and the manner in which the adults there carry out their responsibilities. Public opinion expresses a great deal about what is believed should be done in schools, but there is very little positive public appreciation of the actual work carried out by teachers in their classrooms.

In the next chapter, Chapter 8, the various entities of social capital for pupils will be investigated, using a multivariate method and in the next following chapter, Chapter 9, data analysis of the responses from the twenty-nine granddads will be presented, in order to highlight their role in the classroom.

Chapter 8

Multivariate Data Analysis

8.1 Introduction

In contrast to research conducted in controlled environments, a non-experimental research design is more commonly implemented in the social sciences. In this part of the study the method of structural equation modelling (SEM) is used. The purpose of using SEM, according Faulbaum is to "... estimate the unknown model parameters, such as structural coefficients, variances under the introduced theoretical constraints and to evaluate the overall fit of the model to the data" (1993, p.10). Structural parameters describe these functional relationships and indicate the effect of the independent variables on dependent variables (Loehlin 1992).

In accordance with the assumptions that guided the specification of the structural and operational models, one measurement model was constructed for the whole pupil population. However, after closing insignificant paths to improve the fit between the model and the data, the fit of the data actually decreased and the model ceased to function. Ultimately, the difference between the data collected from boys and girls made it necessary to divide the pupil data set into two -- one for boys and one for girls.

8.2 Development of gender-defined measurement models

The measurement model as described in Chapter 5 is the theoretical background for the models used for the analysis of the pupil data set (see Fig. 5.3). Gender is one of the independent variables and in order to investigate the differences regarding this variable, the data are divided into

two sub-sets, one for the boys and one for the girls. Two different measurement models have also been prepared. The first is described in Figure 8.1. Age (AGE) and norms and structure (NS) are the independent variables and their effects on three dependent latent variables indicating different entities of social capital are measured in this model.

The model is used for the boy data set (model A) and the girl subset of the data is used in the same model for model B. The second measurement model is described in Figure 8.2 and is used for the girl sub-set of the data (model C). The boy sub-set of the data set is used in this model to develop

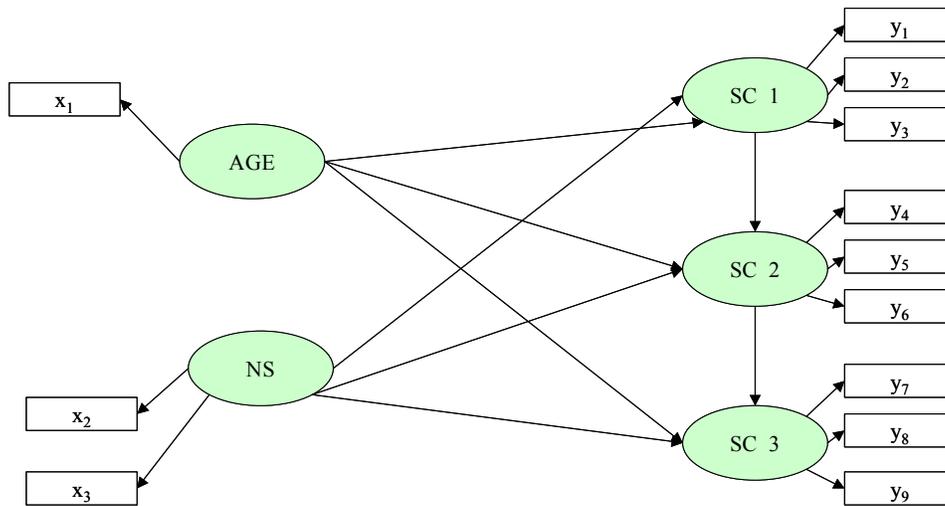


Figure 8.1 Measurement models A and B.

model D. The two latter models incorporate a variable indicating cooperative methods (ME) and the variable indicating age is excluded. The variables that denote order and rules in the classroom and a quiet and pleasant working environment are the same as those used in study C to indicate the same variables.

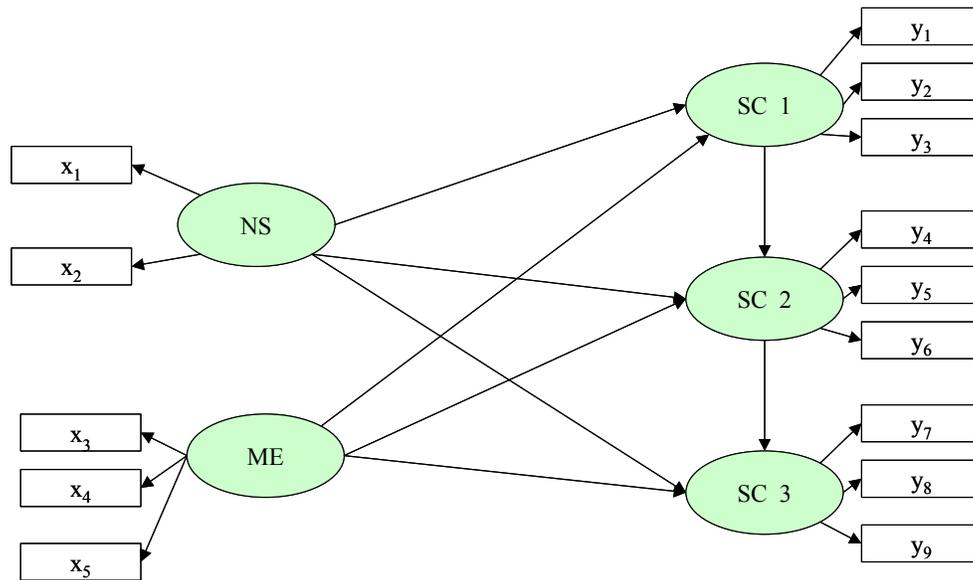


Figure 8.2 Measurement models C and D.

8.3 Factor analysis and data reduction for the boys

Factor analysis is used for data reduction to identify factors (latent variables) that underlie the relation among a set of observed variables (manifest variables), that are the indicators presumed to reflect the construct investigated (Hinkle 1988). Exploratory factor analysis is concerned with the question of the number of factors that are necessary to explain the relationships among a set of indicators and to estimate factor loadings. The major purpose is to reduce a large set of variables to a smaller, more manageable set of items, rather than to test a hypothesis. Factor analysis is thus used both for the boy sub-set and the girl sub-set of the pupil data. The result of the factor analysis regarding the boy data set results in a data reduction whereby three components indicating social capital are extracted (see Table 8.1.). The component SC1(social capital between pupils) is indicated by three factors, STRETE, denoting students feeling safe in school, SCNSSE, denoting co-operation between students in the classroom and SCNSSRE, denoting co-operation between students during breaks.

Table 8.1 Factor loadings, for model A and D (rotated, varimax)

	Principal components		
	SC2	SC3	SC1
GIJOSOE granddad is solving conflicts	0,75	0,07	0,04
GIJOADE granddad is helping everyone	0,71	0,04	-0,01
SCTRGDE granddad gives individual support	0,54	0,36	0,10
GIJODIE granddad is stopping violence	0,50	0,03	0,04
SCTRLPE talk to teacher when there is a problem	0,05	0,80	-0,02
SCTRLAE individual support from teacher	0,06	0,79	0,13
SCCOLDE discuss with teachers	0,02	0,67	0,26
SCTRMOE talk to granddad when there is a problem	0,44	0,48	0,04
SCNSSEE co-operation in the classroom	0,07	0,11	0,71
SCTRETE students feeling safe in school	0,18	0,11	0,57
SCNSSRE co-operation during breaks	0,10	0,06	0,47

The second component of social capital (see Fig.8.2), SC2 (social capital between pupils and granddad) is indicated by five variables, GIJOSOE, denoting granddad resolving conflicts, GIJOADE, denoting granddad helping every pupil, SCTRGDE denoting pupils being provided with individual help by the granddad, GIJODIE denoting the presence of the granddad preventing violence and SCTRMOE denoting opportunities for pupils to talk to the granddad when there are any difficulties. Among these five indicators, two, SCTRGDE and SCTRMOE, also have large factor loadings on the third component (SC3, social capital between pupils and teachers). Therefore these indicators are excluded whereby three indicators remain that denote social capital between the pupils and the granddad. These are also indicators with regard to the work of the granddad in the school. The third component, SC3, is indicated by three observed variables. The first is SCTRLAE, denoting pupils getting individual support from the teacher, SCTRLPE, denoting pupils possibility to talk to the teacher when there is a problem and SCCOLDE, denoting pupils possibility of discussing with the teacher.

8.4 Path diagrammes for models A and B

The dependency structure of the model representing functional relationships is presented in the path diagrams by arrows aiming at the dependent variables. Four models are presented. The first is model A (Fig. 8.3.) with the boy data set. The second is model B (Fig. 8.4.), which is model A used for the girl data set. The third model C (Fig. 8.5.) is for the girl data set and it is subsequently used for the boy data set in model D (Fig. 8.6.) In model A two latent independent variables indicate three dependent variables. These three indicate different entities of social capital. The path between ξ_2 and η_3 and the path between η_2 and η_3 are closed because they are not significant. Error terms between $y_{(1,1)}$ and $y_{(5,2)}$ have been set free in order to gain a better fit of the model to the data. This indicates that, since the granddad is helping all the pupils, the boys feel safe in school.

In the model for the boy sub-set of the data, Age is indicated to be of importance for social capital between granddad and pupils while, at the same time, it has a negative impact on social capital between pupils and social capital between pupils and teacher. This might be explained by the age differences (7-16 years) in the pupil population.

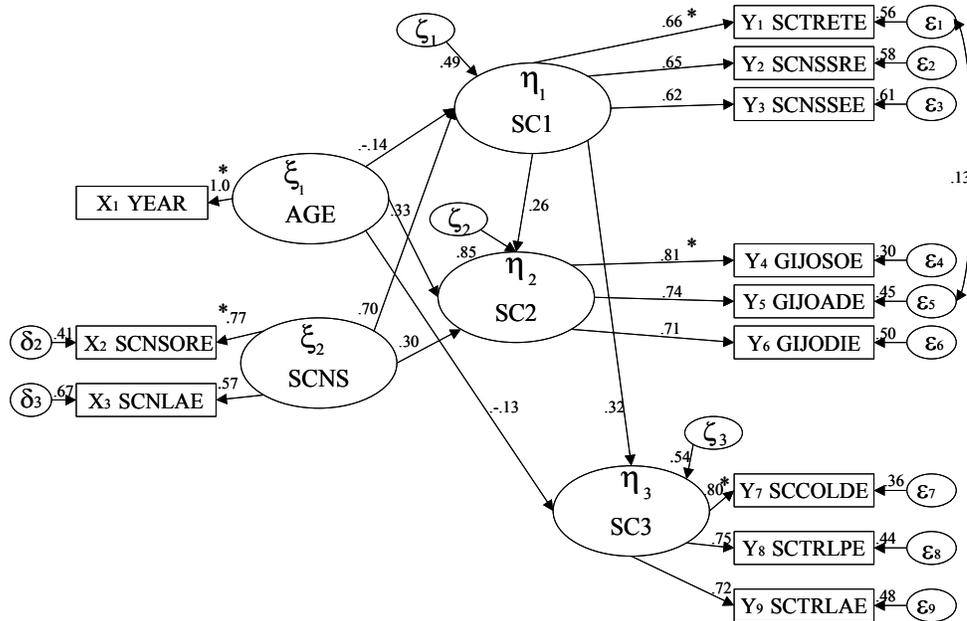


Figure 8.3 Parameter estimated in model A

Notes: (a) Model for the boy sub-set of the data. N=275. (b) All parameters shown here are statistically significant at the 5 per cent level. (c) Maximum likelihood, standardized solution. (d) Table 8.3 presents fit statistics for the model

Where * indicates a fixed parameter;

ξ_1 indicates age

ξ_2 indicates social capital in the form of norms and structure

η_1 indicates social capital between pupils

η_2 indicates granddad's work; and social capital between pupils and granddad

η_3 indicates social capital between pupils and teacher

X_1 YEAR; denotes the age of the pupils

X_2 SCNSORE; denotes order and rules in the classroom

X_3 SCNSLAE; denotes quiet and pleasant working environment

Y_1 SCTRETE; denotes pupils feeling totally safe in school

Y_2 SCNSSRE; denotes co-operation between pupils during breaks

Y_3 SCNSSEE; denotes co-operation between pupils in the classroom

Y_4 GIJOSOE; denotes granddad resolving conflicts

Y_5 GIJOADE; denotes granddad helping everyone

Y_6 GIJODIE; denotes the presence of the granddad preventing violence

Y_7 SCOLDE; denotes opportunities for pupils to discussions matters with the teacher

Y_8 SCTRLPE; denotes pupils talking to teacher when difficulties arise

Y_9 SCTRLAE; denotes pupils being provided with help by the teacher

Norms and structure are also seen to be of importance for both social capital between pupils and social capital between pupils and granddad. Social capital between pupils has an impact on the relationship between the pupils and the granddad and that between the pupils and the teacher.

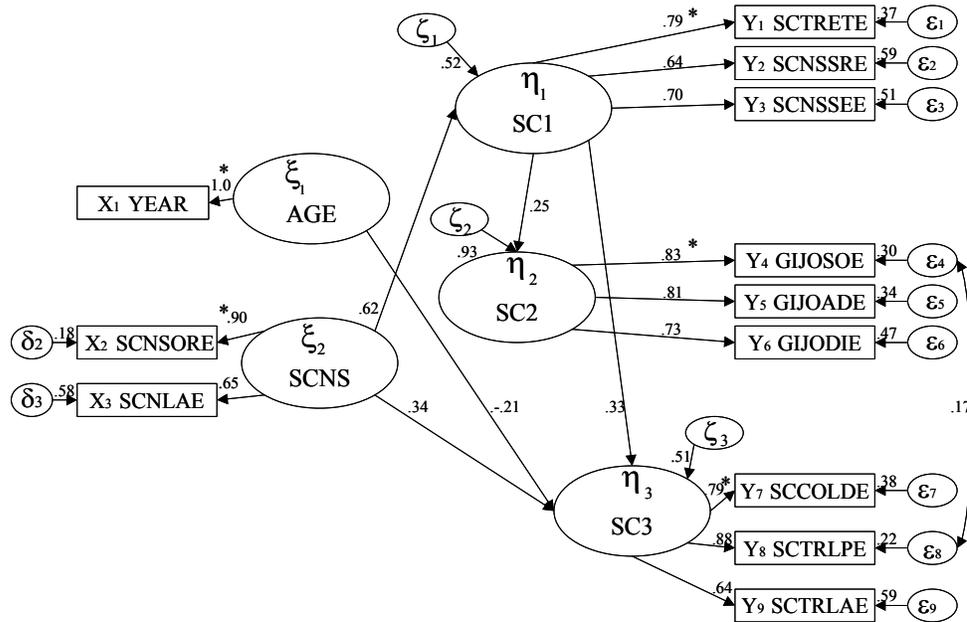


Figure 8.4 Parameter estimated in model B

Notes: (a) Model for the boy sub-set of the data but also applied to the girl sub-set of the data. N=249. (b) All parameters shown are statistically significant at the 5 per cent level. (c) Maximum likelihood, standardized solution. (d) Table 8.4 presents fit statistics for the model

The girl data set was applied to model A and subsequently called B (see Fig. 8.4). The fit statistics for the model is presented in Table 8.7. The paths that were not significant were closed: $\xi_1 - \eta_1$, $\xi_2 - \eta_2$, $\xi_1 - \eta_2$ and $\eta_2 - \eta_3$. Error terms between $y_{(4,2)}$ and $y_{(8,3)}$ were set free to get a better fit of the model to the data. This indicates that the girls go to their teacher when having a problem, the teacher talks to the granddad and the granddad is solving the conflicts for them.

The results indicated from this model show that Age has no impact on social capital between pupils and social capital between pupils and granddad but has a negative effect on social capital between pupils and teacher. This could be explained by the fact that the girls from seven to 16 years of age have different relations to their teachers (mostly female). Little girls tend to love their teacher while teenagers protest.

Norms and structures are important for social capital between pupils and social capital between pupils and teacher but have no impact on social capital between pupils and granddad in the girl model.

The main differences between model A and model B are that norms and structures are more important in model A and that AGE has a different impact in these two models.

8.5 Factor analysis and data reduction for the girls

For the girl sub-set of the data three components were also extracted. SC1 is the social capital between the pupils themselves, SC2 is the social capital between the pupils and the granddad and SC3 is the social capital between the pupils and the teacher.

Table 8.2 Factor loadings, for model B and C (rotated, varimax)

	Principal components		
	SC2	SC3	SC1
GIJOADE granddad is helping everyone	0,74	-0,07	-0,09
GIJOSOE granddad is solving conflicts	0,72	-0,02	0,07
SCTRGDE granddad gives individual help	0,69	0,34	0,16
SCTRMOE pupils can talk to granddad when there is a problem	0,64	0,37	0,14
GIJODIE granddad is stopping violence	0,54	-0,15	0,29
SCTRLAE individual assistance from teacher	-0,05	0,66	0,02
SCTRLPE talk to teacher when there is a problem	0,21	0,62	0,05
SCCOLDE discuss with teachers	0,05	0,59	0,01
SCTRETE pupils feeling safe in school	0,38	0,46	0,45
SCNSSEE co-operation between pupils in the classroom	0,20	0,22	0,80
SCNSSRE co-operation between pupils during breaks	0,10	0,28	0,60

The component SC1 (see Table 8.2) is indicated by three factors, STRETE, denoting pupils feeling safe in school, SCNSSE, denoting co-operation between pupils in the classroom and SCNSSRE, denoting co-operation between pupils during breaks.

The second component of social capital, SC2, is indicated by five variables, GIJOADE, denoting the granddad helping every pupil, GIJOSOE, denoting the granddad resolving conflicts, SCTRGDE denoting pupils being provided with individual help by the granddad, SCTRMOE denoting opportunities for pupils to talk to the granddad when there are any difficulties and GIJODIE denoting the presence of the granddad preventing violence. Two of these five indicators, SCTRGDE and SCTRMOE, also have large factor loadings with regard to the third component. Therefore they are excluded here, leaving three indicators that denote social capital

between the pupils and the granddad. These are also indicators for the work of the granddad in the school. The third component, SC3, is indicated by three observed variables. The first of these is SCTRLAE, denoting pupils being provided with individual help by the teacher, the second is SCTRLPE, denoting opportunities for pupils to talk to the teacher when there are any difficulties and the third is SCCOLDE, denoting opportunities for pupils to discuss matters with the teacher.

8.6 Path diagrammes for models C and D

Model C is a model used for the girl sub-set of the data. In this model the latent construct for AGE was excluded while a variable indicating cooperative methods was introduced in a model applied to the girl sub-set of the data. The fit here is better than it is in the B-model, see Table 8.3. In this model the order of the indicators for the η variables are changed, compared to model A and model B. The indicators for η_1 have been changed within the second and third indicator. The indicators for η_2 have changed order between indicator two and indicator three and finally the two first indicators for η_3 have changed place in this measurement model.

The path between ξ_2 and η_2 is closed because it is not significant. The error terms between $y_{(4,2)}$ and $y_{(7,3)}$ were set free to provide a better fit of the model to the data. This indicates that the girls talk to their teachers when experiencing difficulties; the teacher talks to the granddad and the granddad deals with these difficulties.

It is indicated in model C that norms and structures are of importance for social capital between pupils and social capital between pupils and teacher but negative with regard to social capital between pupils and granddad. This might be explained by the fact that there is a tendency to use a granddad intervention when the school is experiencing difficulties, especially with regard to disruptive behaviour among the pupils. It indicates that the cooperative method is important for social capital between pupils and social capital between pupils and teacher but does not appear to have any effect on social capital between pupils and granddad. Social capital between pupils has impact on both social capital between pupils and granddad and social capital between pupils and teacher, which could indicate that the social capital between pupils has an effect in the relationships with both the granddad and the teacher. Social capital between pupils and granddad in turn has a negative impact on social capital

between pupils and teacher, which could indicate that girls look to the granddad for support rather than to the teacher.

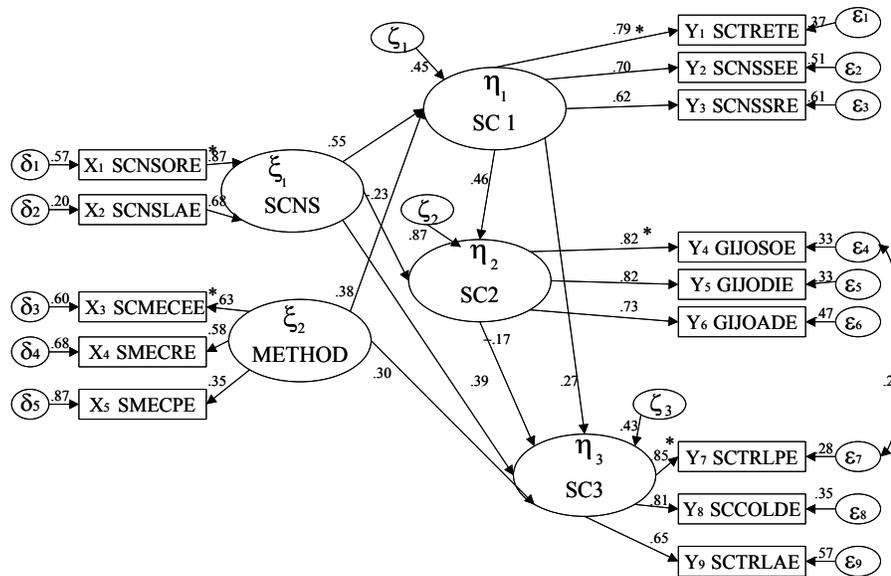


Figure 8.5 Parameter estimated in model C

Notes: (a) Model for the girl sub-set of the data. N=249. (b) All parameters shown are statistically significant at the 5 per cent level. (c) Maximum likelihood, standardized solution. (d) Table 8.3 presents fit statistics for the model

Where * indicates a fixed parameter;

ξ_1 indicates social capital in the form of norms and structure

ξ_2 indicates cooperation possible by method

η_1 indicates social capital between pupils

η_2 indicates granddad work; and social capital between pupils and the granddad

η_3 indicates social capital between pupils and the teacher

X_1 SCNSORE;	denotes order and rules in the classroom
X_2 SCNSLAE;	denotes quiet and pleasant working environment
X_3 SCMECEE;	denotes working in groups with cross curriculum tasks
X_4 SCMECRE;	denotes participating in plays
X_5 SCMECPPE;	denotes working in projects outside school
Y_1 SCTRETE;	denotes pupils feeling totally safe in school
Y_2 SCNSSEE;	denotes co-operation between pupils in the classroom
Y_3 SCNSSRE;	denotes co-operation between pupils during breaks
Y_4 GIJOSOE;	denotes granddad resolving conflicts
Y_5 GIJODIE;	denotes the presence of the granddad preventing violence
Y_6 GIJOADE;	denotes granddad helping everyone
Y_7 SCTRLPE;	denotes pupils talking to teacher when experiencing difficulties
Y_8 SCOLDE;	denotes opportunities for pupils to have discussions with the teacher
Y_9 SCTRLAE;	denotes pupils being provided with individual help by the teacher

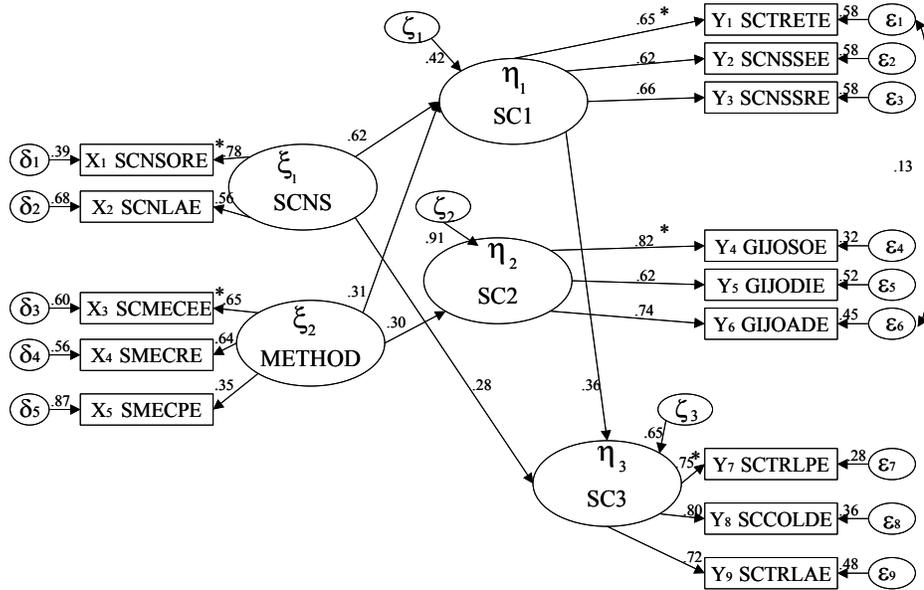


Figure 8.6 Parameter estimated in model D

Notes: (a). Model for the girl sub-set of the data, but as applied to the boy sub-set of the data. N=275. (b) All parameters shown are statistically significant at the 5 per cent level. (c) Maximum likelihood, standardized solution. (d) Table 8.3 presents fit statistics for the model

Model D is implemented to transform the boy sub-set of the data into model C. The result of this is presented in Figure 8.6. Three paths are closed because they are not significant: η_1 and η_2 , ξ_1 and η_2 and ξ_2 and η_3 . The error terms between $y_{(1,1)}$ and $y_{(3,2)}$ are set free to allow a better fit of the model to the data. This indicates that the granddad helps everyone and that the boys feel safe in school. Norms and structures are important for social capital between pupils and social capital between pupils and teacher in this model. Cooperative methods are important for social capital between pupils and social capital between pupils and granddad. Social capital between pupils is important for social capital between pupils and teacher.

The differences between model C and model D are that the granddad appears to be more involved, that variation in his importance to the boys when cooperative methods are being implemented and that social capital between pupils is not important for social capital between pupils and granddad at all.

Comparing the boy model and the girl model, it is shown that, when AGE is included, social capital between pupils is of importance for the

social capital between the boys and the granddad. Norms and structure are also different depending on whether or not Age is included. From the girls' point of view, social capital between pupils is the only variable having an impact on the social capital between the granddad and the pupils.

Table 8.3 Indicators of the fit of the models to the data

	Model A	Model B	Model C	Model D
Chi-square	63.69	189,13	170,76	102,06
Degrees of Freedom	47	48	67	70
Probability	0.052	0.000	0.000	0.007
Goodness of Fit Index	0.963	0.887	0.910	0.949
Root Mean Square Residual	0.044	0.073	0.055	0.048

Key: Model A is the model for boys; model B is a boy model estimated with girl data set, model C is the model for girls, model D is a girl model estimated with boy data set

Table 8.4 Summary statistics for Model A and B (standardized estimates β , unstandardized B, t-values t)

	Model A			Model B		
	Parameter (* = fixed)	Boy data set		Girl data set		
	β	B	t	β	B	t
1.	$\lambda^x(1,1)$		1.0 *		1.0 *	
	$\lambda^x(2,2)$	0.77	1.0 *	0.90 *	1.0 *	
	$\lambda^x(3,2)$	0.57	0.75	0.65	0.72	8.57
2.	$\delta(1,1)$					
	$\delta(2,2)$	0.41	0.41	0.18	0.18	2.40
	$\delta(3,3)$	0.67	0.67	0.58	0.58	8.87
3.	$\lambda^y(1,1)$	0.66	1.0 *	0.79	1.0 *	
	$\lambda^y(2,1)$	0.65	0.98	0.64	0.81	8.89
	$\lambda^y(3,1)$	0.62	0.94	0.0	0.89	9.51
	$\lambda^y(4,2)$	0.81	1.0 *	0.83	1.0 *	
	$\lambda^y(5,2)$	0.74	0.92	0.73	0.85	11.62
	$\lambda^y(6,2)$	0.71	0.87	0.81	0.91	12.54
	$\lambda^y(7,3)$	0.80	1.0 *	0.79	1.0 *	
	$\lambda^y(8,3)$	0.75	0.94	0.88	1.12	13.56
	$\lambda^y(9,3)$	0.72	0.91	0.64	0.81	10.11
4.	$\varepsilon(1,1)$	0.56	0.55	0.37	0.37	6.31
	$\varepsilon(2,2)$	0.58	0.58	0.59	0.59	9.10
	$\varepsilon(3,3)$	0.61	0.61	0.51	0.51	8.27
	$\varepsilon(4,4)$	0.30	0.34	0.30	0.32	5.90
	$\varepsilon(5,5)$	0.45	0.45	0.47	0.47	8.87
	$\varepsilon(6,6)$	0.50	0.50	0.34	0.34	6.78
	$\varepsilon(7,7)$	0.36	0.36	0.38	0.38	8.12
	$\varepsilon(8,8)$	0.44	0.44	0.22	0.22	4.82
	$\varepsilon(9,9)$	0.48	0.48	0.59	0.59	10.07
	$\varepsilon(5,1)$	0.13	0.13	$\varepsilon(8,4)$ 0.17	0.18	5.74
5.	$\beta(2,1)$	0.26	0.32	0.26	0.28	3.30
	$\beta(3,1)$	0.32	0.38	0.33	0.32	3.54
	$\beta(3,2)$	n.s	n.s	n.s	n.s	n.s
6.	$\gamma(1,1)$	-0.14	-0.09	-2.12	n.s	n.s
	$\gamma(2,1)$	0.33	0.27	5.01	n.s	n.s
	$\gamma(3,1)$	-0.13	-0.10	-2.01	-0.21	-0.17
	$\gamma(1,2)$	0.70	0.60	5.68	0.62	0.54
	$\gamma(2,2)$	n.s	n.s	n.s	n.s	n.s
	$\gamma(3,2)$	0.31	0.32	2.11	0.34	0.30

1. Three observed variables indicating two independent variables;
2. Error terms for three indicators
3. Nine observed variables indicating three dependent latent variables;
4. Error terms for nine indicators
5. Regression of independent variables on dependent variables;
6. Regression of two independent variables on three dependent variables; (5,1) denotes an error term between pupils feeling secure and the granddad helping all pupils. (8,4) denotes an error term between pupils talking to their teacher when having a problem and granddad solving conflicts between pupils

Table 8.5 Summary statistics for Model C and D (standardized estimates, unstandardized B, t-values t)

	Model C			Model D		
	Parameter (* = fixed)	Girl data set β B t		Boy data set β B t		
1.	$\lambda^x(1,1)$	0.87	1.0*	0.78	1.0*	
	$\lambda^x(2,1)$	0.68	0.78	0.56	0.72	8.66
	$\lambda^x(3,2)$	0.63	1.0*	0.64	1.0*	6.31
	$\lambda^x(4,2)$	0.57	0.90	0.66	1.04	5.33
	$\lambda^x(5,2)$	0.36	0.57	0.36	0.56	4.22
2.	$\delta(1,1)$	0.24	0.24	0.39	0.39	4.18
	$\delta(2,2)$	0.54	0.54	0.68	0.68	9.29
	$\delta(3,3)$	0.60	0.60	0.60	0.60	6.76
	$\delta(4,4)$	0.68	0.68	0.56	0.56	6.17
	$\delta(5,5)$	0.87	0.87	0.87	0.87	10.77
3.	$\lambda^y(1,1)$	0.79	1.0*	0.65	1.0*	
	$\lambda^y(2,1)$	0.70	0.70	0.62	1.02	9.88
	$\lambda^y(3,1)$	0.62	0.62	0.66	0.96	8.93
	$\lambda^y(4,2)$	0.82	1.0*	0.82	1.0*	
	$\lambda^y(5,2)$	0.82	0.99	0.69	0.85	12.60
	$\lambda^y(6,2)$	0.73	0.88	0.74	0.91	11.56
	$\lambda^y(7,3)$	0.85	1.0*	0.75	1.0*	
	$\lambda^y(8,3)$	0.81	0.95	0.80	1.07	13.75
	$\lambda^y(9,3)$	0.65	0.77	0.72	0.96	10.80
4.	$\varepsilon(1,1)$	0.37	0.37	0.58	0.57	6.63
	$\varepsilon(2,2)$	0.51	0.51	0.61	0.61	8.59
	$\varepsilon(3,3)$	0.61	0.61	0.57	0.57	9.46
	$\varepsilon(4,4)$	0.33	0.34	0.32	0.32	6.39
	$\varepsilon(5,5)$	0.33	0.33	0.52	0.52	6.68
	$\varepsilon(6,6)$	0.47	0.47	0.45	0.45	8.96
	$\varepsilon(7,7)$	0.28	0.28	0.44	0.44	6.02
	$\varepsilon(8,8)$	0.35	0.35	0.36	0.36	7.73
	$\varepsilon(9,9)$	0.57	0.58	0.48	0.48	9.94
	$\varepsilon(7,4)$	0.20	0.20	$\varepsilon(6,1)$	0.13	0.13
5.	$\beta(2,1)$	0.46	0.48	n.s	n.s	3.80
	$\beta(3,1)$	0.27	0.29	0.42	0.36	2.03
	$\beta(3,2)$	-0.17	-0.17	n.s	n.s	2.38
6.	$\gamma(1,1)$	0.55	0.50	0.62	0.51	6.20
	$\gamma(2,1)$	-0.23	-0.22	n.s	n.s	-1.98
	$\gamma(3,1)$	0.39	0.38	0.28	0.27	3.57
	$\gamma(1,2)$	0.38	0.48	0.31	0.31	3.77
	$\gamma(2,2)$	n.s	n.s	0.30	0.39	n.s
	$\gamma(3,2)$	0.30	0.40	n.s	n.s	2.75

1. Five observed variables indicating two independent latent variables;
2. Error terms for five indicators;
3. Nine observed variables indicating three dependent latent variables;
4. Error terms for nine indicators;
5. Regression of independent variables on dependent variables;
6. Regression of two independent variables on three dependent variables; (6,1) denotes an error term between pupils feeling secure and the granddad helping all pupils. (7,4) denotes an error term between pupils talking to their teacher when having a problem and granddad solving conflicts between pupils.

8.7 Summary

The theory presented in Chapter 2, together with the structural model described in Chapter 5, constitute the background for the measurement models that have been applied in order to investigate the extent to which the models fit the pupil data set. Through the application of factor analysis, data reduction was attained. The results of this indicate that, both for the boy sub-set of the data and for the girl sub-set of the data, the granddad's work itself is to be considered as part of the social capital between pupils and granddad. The three indicators for the granddad resolving conflicts between pupils, for the granddad helping everyone and for the presence of the granddad preventing violence, have therefore been used for indicating social capital between pupils and granddad.

There are differences between the boys and the girls, which become apparent in the composite versions of the entities regarding social capital.

With regard to the girls, on the one hand, the cooperative method is important for social capital between the pupils themselves and between the pupils and the teacher while with regard to the boys, on the other hand, the cooperative method is important between the pupils themselves and between the pupils and the *granddad* (may be gender biased; boys-men; girls-women).

Age is important for boys and the granddad. But Age has a negative impact with regard to the relationships between girls and the teacher.

Norms and structure is important for boys with regard to social capital between the pupils themselves and between the pupils and the *granddad*, while for girls, norms and structures is important between the pupils and the *teacher* (may be gender biased).

As regards norms and structures and cooperative methods, social capital between the pupils themselves is indicated to be important for the social capital between the granddad and pupils, which in turn influences the social capital between the pupils and the teacher.

Chapter 9

The Granddad Experience

9.1 Introduction

Since today there is a considerable need for there to be a greater number of adults in schools and classrooms, most of the granddads in this study, although they have a particular classroom as a base, do also participate in the work and activities that take place elsewhere in the school. Most of them feel that they are needed and that they are able to do more work in this way. Despite their age, they are still very active and want to participate and be of assistance whenever and wherever possible, to do as much work as they are able to do. Since this kind of work is new to Swedish society, the granddads are required to prepare their own job descriptions for this work in the schools. Therefore, each of the granddads has developed his work in a different way, depending on the context and the needs of the school in which he works.

In addition, each school is organized along different lines. In some schools the teachers work in teams, so that the granddad may be working in all the classes that are part of the team. Often, in years 7 to 9, the task of the granddad is to keep an eye on what is going on in the school during the breaks, especially in the corridors close to the student lockers. Initially, granddads are often assigned to a particular classroom, but eventually they have found themselves working throughout the school as they discover that it is in this way that they are best able to make use of their own experiences.

Most of the heads expressed the view that they wished to have a granddad who is independent and who is able to establish what is needed and carry out his work in his own way in the school.

Since the granddads in the 17 schools included in this research did not comment very extensively in their responses to the questionnaires, a report on the work of the granddads, prepared under the auspices of the National Agency for Education, was presented at the granddad association monthly meeting, held in November 2001. Subsequently, the granddads were asked to complete a questionnaire containing seven open-ended questions, in order to obtain a deeper understanding of their experiences from their work in the classrooms and the extent to which these

experiences contributed to any developments that increased social capital on their part. There were 23 granddads attending the meeting, all of whom completed the questionnaire, which was also despatched to those granddads working in schools who were not present at the meeting. Six such questionnaires were subsequently completed and returned. The seven questions contained in the questionnaire were as follows:

Why did you choose to work as a granddad in a school?

What was your impression of school when you returned there as an adult?

What is the most important aspect of your work as a granddad in school?

What do you gain from your work as a granddad in school?

Do you feel that you are an active participant in school activities?

What advice would you wish to offer to teachers and heads who are considering employing a granddad in their school?

What advice would you give to prospective granddads?

A qualitative method was used in order to analyse the data from the responses to the open-ended questions. First, all the responses from the 23 granddads in attendance, together with the other six granddads, were collated. Then this data set was analysed to identify similarities across the various responses in order to establish several different categories. The responses to each question were treated separately. The same qualitative method that is described in Chapter 6 was used here to summarize the results. Thus, all responses to each question have been collated, after which the traces of different categories contained in the responses, together with similarities and differences, have been written down.

9.2 Reasons for joining the intervention

Responses to the question as to why the men choose to work as granddads in the school may be grouped into four categories. The first of these is where the respondents express their ambition to be of assistance (2 responses). They wish to assist the students with Swedish language acquisition and homework, and make a contribution on the basis of their own experience. The second of these categories is where the respondents indicate that they like children and working with children (12 responses). The third category of responses relates to the respondents' view that the project appeared to be exciting, that they enjoy teaching, that they consider

the work to be challenging and that they find they are able to be of use to society and to the pupils (12 answers). Finally, the fourth category contains responses that suggested this work replaces unemployment in various ways. The responses of five of the remaining eight granddads combine categories three and four, that is to say, they state that the reason why they work in a school is that they had previously been unemployed while at the same time they find the work both challenging and interesting. The responses of the remaining three of these eight granddads state either that the work was forced on them as a condition for participation in labour market measures or that he was informed of the work by the Labour Market Board.

9.3 Granddads impression of returning to school

It is worth recalling that there are significant differences between the schools participating in this investigation. Consequently, there was some variety with regard to the school environment into which each granddad entered when commencing his assignment. Many granddads were allocated to schools which were relatively peaceful even before they arrived, while others joined schools which were experiencing difficulties in this respect. There was a wide range of impressions gained by granddads on returning to school as adults after forty years. It has been possible to group their responses into three recognizable categories. These three categories are as follows: positive responses (8 of the granddads), responses noting differences (10 of the granddads) and, finally, negative responses (11 of the granddads). Examples of how each category of response was expressed are to be found in Table 9.1.

Table 9.1 Granddads impression of school on returning there
(authors translation from Swedish)

<i>Positive</i>	<i>Differences noted</i>	<i>Negative</i>
Very satisfied – I was made to feel very welcome by teachers and pupils	Completely different from how things were when I went to school.	Discipline was not what it should have been.
Positive impression of the work of the teachers and other staff.	It was not how things were in my time when I attended school. I think it was better before.	Worse than I imagined it would be.
Positive because I am interested in education and the development of the children	Like arriving on another planet. In no way similar to the school where I began in the 1940s.	Absolutely terrible, no order etc.
Those in the school were pleased that an additional adult was to be there.	A freer school. Here the pupils question things and are trained to work in groups.	Chaos! But it is chaos one is able to "enter into" after a period of adjustment. One has to be on the ball in order to avoid becoming a turning buoy.
Nothing in particular. Relatively quickly made to feel I belonged to the gang.	Considerable differences! I felt that today children are very restless and lack concentration, compared to when I went to school.	A shock. The level of noise. Chaos in the classroom. Lack of respect.
Very positive. The image of a crisis presented in the mass media does not match the reality I faced.		Very slack and lack of respect towards older people.

9.4 Important aspects of granddads work

All the respondents wrote about what they felt to be the most important aspect of their work as a granddad in school. Their responses fall into three categories, where the first concerns exercising influence and being a role model (9 of the granddads), the second has to do with being available and able to offer comfort and to provide assistance (9 of the granddads), while the third category concerns being able to support the pupils in various ways in school (10 of the granddads). One of the respondents stated that he did not really have an answer to this question. It might well be that he arrived at the school and saw things "through a new pair of eyes." Two of the granddads provided statements that could be related to responses in two different categories. Examples of how granddads expressed what they felt to be the most important aspect of their work are reproduced in Table 9.2. In one of the responses, the granddad expressed the view that it was important that he be a male role model, socially supportive, a listener and a

comforter. That he should give of his own knowledge of life, experiences and feelings. He should support the weaker but also stimulate the stronger to go further. Most of the respondents expressed the opinion that they consider it important that granddads behave in a friendly but resolute manner, and that they establish clear limits that apply to all pupils. One of the respondents considered that having time available, and to be able to show empathy and patience, are all excellent resources for any granddad working in a school.

Table 9.2 Granddads assessment of the relevance of their work (authors translation from Swedish)

<i>Positive influence</i>	<i>To assist, to be available</i>	<i>To support</i>
To attempt to influence the pupils in a positive way	To comfort those pupils who are sad and exposed.	Be prepared to spend time with the pupils, to see them as individuals and to support them.
To teach the pupils to be together with classmates in an harmonious way	To be available for the pupils.	To be generally supportive to the school as a whole.
To provide the pupils with everyday values for the situations that arise each day.	To be available for both the pupils and teachers, particularly during the breaks, many discussions on just about everything, that they are able to let off steam by talking, knowing that nothing goes further than the ears of the granddad.	To support and assist with all manner of things, based on my own life experience.
To be an adult role model.	To be there and to provide security, stability, love and consideration, justice and to be consistent, honesty, etc.	Practical support in all subjects.

9.5 Granddads notions of intervention benefits

With regard to the responses to this question, the comments were largely very positive. Here, too, the responses may be grouped into three categories. In the first category (9 granddads), the respondents state that they feel needed and that they have established new contacts in the community. In the second category (15 granddads), the respondents describe their feelings about working in a school and, finally, in the third category (5 granddads) the respondents consider that they are learning something about the functioning of society. Examples of statements by respondents in each of the three categories are presented in Table 9.3.

Table 9.3 Granddads, impressions of work benefits
(authors translation from Swedish)

<i>Needed</i>	<i>Feelings</i>	<i>Learning</i>
A reality "fix" and a social life.	It is a wonderful feeling when the pupils come forward and ask questions about anything and everything as if one were their real granddad.	New experiences, my contributions meet with direct responses.
As a person, I really feel needed. No age segregation – rather the opposite, particularly in the case of pupils with immigrant backgrounds.	Much happiness, little sorrow.	I have both children of my own and grandchildren who are in their middle-school years. I am learning how society functions today with regard to children and young people.
A feeling of being needed and gaining insight into the world of young people today.	It is stimulating to work with young people who are open, honest and spontaneous.	I have learned a great deal myself.
I am considered a professional and an equal by the staff.	Headaches and sleepless nights but also much that is positive, not only from the school management, teachers, and parents but particularly from the pupils. During the whole of my 40 years in working life never have I been met in such a positive manner. I feel very happy.	Working as a granddad means that I will learn Swedish fully.

Two of the granddads mention their financial position, in a light-hearted way, although there is obviously some seriousness behind their comments. The financial position of both is precarious, living as they do on low incomes compared to others working in schools.

9.6 Granddads' participation in school

The responses to this question may also be grouped into three categories. The first category (which includes responses from 14 of the granddads) contains statements that indicate affirmative answers to the question as to whether they felt they are active participants in school activities. This is developed further by one of the granddads when he states that he is able to observe aspects of these activities which are not always obvious to the teachers and consequently he is able to discuss with the teachers matters other than those that are purely educational or matters specific to particular

subjects. A second granddad states that the teachers believe it is positive because those pupils who require assistance are given help when the granddad is present. A third granddad states that because he has become part of the team, he feels he participates fully in the activities.

The second category (which includes responses from 13 of the granddads) contains statements that include superlatives that underline the affirmative responses. Six of the granddads use the term “to the greatest degree,” three use the term “absolutely,” one the term “really,” one the term “definitely” and one expresses his affirmative response by writing the cry “yees!” The third category consists of two granddads who report that they do not feel they are 100% active participants, where one states that he is 95% an active participant and the other reports that he feels he is an active participant “now and then.”

9.7 Advice to teachers and principals

In response to this question, the granddads offered a number of common suggestions. The suggestions are presented here in the form of four categories. The first is the advice to employ a granddad. The second deals with financial advice. The third category contains advice on what the school will gain from employing a granddad and the fourth advice about how a granddad should be introduced into the school. Most of the granddads offered advice that has been placed in several categories. Seven of them stated the importance of granddads having broad experience of life and work experience. Examples of these statements are given in Table 9.4. They also state that it is important to point out that the granddad does not replace the pastoral care staff or the auxiliary staff. Nor should they be considered as some kind of guard but rather, in their view, the school should take cognisance of the specific skills and knowledge of each granddad and exploit them imaginatively in order that maximum use is made of them.

Table 9.4 Lessons learned for schools seeking to engage granddads
(authors translation from Swedish)

<i>Advice to employ</i>	<i>Finance</i>	<i>The school gains:</i>	<i>How to introduce a granddad</i>
Try it! You won't regret it	Don't only look at the money	Someone who provides comfort, calm and assistance	Find the appropriate person
Get one!	Invest in that which increases diversity	Calmer working environment	Provide information about the school routines
Take the opportunity!	Set aside financing	Provides new experiences	Enquire about his abilities and what he would like to do, and where possible allow him to do it
Give it a try and see!	Financing to enable the granddad to be retained until working hours are finished	A person who is between the teacher and the pupils	Let him have a free hand to carry out his work

9.8 Advice to prospective granddads

It is likely that the experiences shared by the granddads have led to the responses to this question being practically unanimous. Eleven of them stress the importance of being calm and patient, to wait for the pupils to make the first approach. Eight of the other granddads state that a prospective granddad should be himself. One of them goes on to state that in this respect the granddad should stand for what he is – be straight, honest, humorous, respectful and teach respect. Three have not responded with any advice here. The remaining seven provide comments about their work. Their advice is reproduced in full below:

Use the opportunity provided by the trial month in order to think over properly if you really will enjoy the work.

Put away your prejudices, try to remember how you were at this age and use your imagination and heart.

Don't rush into the activities with new ideas, but grow into them while retaining and using your own skills and knowledge.

Be flexible and be at hand.

Do not undervalue your work. It requires a whole-hearted approach. It is hard work, but does give a lot back.

The work can be quite hard. Try to set limits as soon as possible, that is, be kind but resolute. Try to get the pupils to understand why there is a certain set of rules.

Treat everyone as equals! Try to be as fair as possible.

9.9 Summary

Most of the men chose to be a granddad in a school for one of two reasons, they were unemployed or retired while still wanting to participate in society and they wanted to support and assist pupils in schools.

When returning to school after 40-50 years, they gain various experiences. As mentioned before, the schools are different with regard to organisation and environment, which of course gives rise to different impressions on the part of each granddad. Accordingly, some of the granddads are quite satisfied with the school environment while others are shocked by it. There are those who experience a lack of that respect for older people that young people showed when they themselves attended school. They express also a feeling of there being chaos, a high level of noise, which was worse than they could have imagined, and lack of discipline. In trying to understand this, they describe the differences as being a feature of a “freer” school and that pupils today are restless and lack concentration. They therefore try to influence the pupils in a positive way by being available and support and assist them. Although this environment makes the work hard and demanding, they like their job because they feel needed and have a social life and gain new experiences. They really feel that they are included among the other professionals in the schools. They show this by using a superlative to underline their responses. In their advice to prospective granddads, their experience also shows through. Men starting to work as a granddad should put away their prejudices, really use their trial month to see if this work suits them because it does involve hard work. They should also be flexible and at hand. As a summary, it could be said that although it is hard work, the granddads still find it rewarding because of the social network with the staff and pupils and the pupils’ positive responses. All this indicates growth of social capital for the granddads themselves in the school situation.

Chapter 10

Discussion and Conclusion

10.1 A learning and ageing society

In the 1960s, Hutchins (1968), when attempting to foresee the future with regard to education, predicted that a “learning society” would develop. Subsequently, during the 1990s, the concept of the learning society was discussed further by Belanger (1995), where, in his view, this concept is associated with lifelong learning and different cultural contexts. “Learning societies are emerging, but in very different and uneven ways and with diverse orientations” (Belanger, 1995, p.377). These were early signs of the merging of society and lifelong learning and this indicates, in a way, the significance of the connection between social capital and lifelong learning. This connection was made explicit by Copley (1980) at the individual (micro) level and by Aspin and Chapman (2001) at the macro level, with regard to organisations and communities. There is also the view, often held in Eastern societies (Okamoto, 2001), that it is not possible to explain learning entirely in terms of economics, in a similar vein to the sense of the concept of social capital implying an emphasis on the importance and uses of spirituality and quality of life.

According to Bengtson (1993), interactions between individuals from different generations play an important part in the growth of trust, the development of the ability to rely on each other and the strengthening of the links involved in such relationships between younger and older people. Such interactions are considered to fall within the scope of the concept of intergenerational learning.

Recent demographic changes have sparked off discussions and investigations regarding the older sectors of the populations in Japan and in Sweden. In a discussion of intergenerational learning, Kaplan (1998) refers to the Japanese concept of *ikigai*, which may be translated as “purpose of life.” In Japan, *ikigai* is a concept that very often crops up in deliberations with regard to policy issues concerning senior citizens, as *ikigai* is generally conceived as being a desirable attitude towards life, contrary to attitudes based on dependency and helplessness.

Ronström (1998), writing about Sweden, is of the opinion that being a senior citizen is a natural consequence of having once been a younger

citizen and thus research should concentrate on a more comprehensive perspective rather than specializing in established categories of research such as "children" and "the elderly." The Swedish Government set up an official commission of enquiry known as Senior 2005 and in an interim report on their ongoing enquiries, this commission has coined the phrase "demolish the age stairs" (Sw. "riv ålderstrappan") (SOU 2002:29). Changes in demography and intergenerational interaction are also considered in this report. There has also been another investigation in Sweden, concerning health services and senior citizens (Stockholm Gerontology Research Center, 2001. Sw. Stiftelsen Stockholms Läns Äldrecentrum). The results of this enquiry indicate that the increasingly large proportion of senior citizens in the population will probably remain healthier for a longer period of time than was the case for earlier generations, which provides opportunities for the senior citizens of today to continue to participate in society to a greater extent than was possible in earlier times. In yet another investigation (Batljan and Lagergren, 2000), an estimate of the costs for health services was made, whereby it was predicted that these costs would not increase as rapidly as had previously been expected because the prior estimates were based on the assumption that such increased costs would begin at the onset of retirement at 65 years of age. Today, as people remain healthier for longer during the course of their lives, the costs for health services will thus not begin to increase substantially until senior citizens reach a very old age – above 80.

In the present study, an exploration within the framework of lifelong learning and social capital has been carried out in a real-life setting, where members of a younger and an older generation have the opportunity to interact. This setting concerns the granddad project in compulsory schools in Sweden, which constitutes an example of how intergenerational lifelong learning can be implemented in such a real-life situation. These granddads work in schools in Sweden in order to assist in the improvement of the social environment for pupils in school during their compulsory education.

10.2 Intergenerational interaction as a means for increasing social capital

In the present study, the correspondence between the theoretical framework and the practicalities of a real-life setting, as this has been observed in classrooms in Sweden, is investigated. Three hypotheses are proposed and

tested regarding social capital between pupils, the granddads' social capital and the teachers' social capital. It follows from the definition of social capital, that it is derived and nurtured in those social contexts where people are working together towards a common goal.

Social capital and pupils

The classroom constitutes the setting and the subject of the research reported in this study, the place where learning is transmitted, where pupils cooperate with each other and where individual pupils feel secure and able to trust and cooperate with the adults present there.

The results of this research indicate that the granddads' work itself is to be considered as part of the social capital between the granddad and the pupils, both boys and girls.

Equal opportunities in school for boys and girls

The pupil responses to the questions concerning those variables used here as indicators for social capital, for cooperation between pupils, do not indicate any differences between boys and girls. This is the case with regard to cooperation in the classroom, cooperation during breaks and cooperation between boys and girls. Thus, the pupil responses indicate that there are equal opportunities for boys and girls in school and that they feel equally safe there.

Differences between boys and girls

The results of this research indicate that this intergenerational intervention is important for both girls and boys. The pupils feel that the granddad assists everyone. On the other hand, there is evidence of some differences between boys and girls in the sense that the responses of the boys more often indicate that they consider the granddad to be important because his presence prevents violence from occurring, because of the support and assistance he provides to disruptive pupils and because he comforts and talks to any pupil experiencing difficulties.

Analysis of the data from the pupil population indicates that some differences are to be found in the responses of boys and girls with regard to feelings of trust and having the opportunity to confide in a friend when a pupil is experiencing difficulties. Thus, it is shown that girls confide in friends to a great extent than do boys when experiencing difficulties, while the boys tend to talk more to an adult, either the teacher or the granddad.

Differences between boys and girls and entities of social capital

Differences between boys and girls become apparent from the analysis of the composite versions of the entities regarding social capital. On the one hand, for the *girls* the cooperative method is important for social capital between the pupils and the *teacher* while, on the other hand, for the *boys*, the cooperative method is important for social capital between the pupils and the *granddad* (may be gender biased; boys-men; girls-women).

Norms and structure are important for *boys* with regard to social capital between pupils in general and the *granddad*, while for *girls*, norms and structures are important for the relationships between the pupils and the *teacher* (may be gender biased).

Age has an important positive effect on the relationships between *boys* and the *granddad* while it has a negative impact with regard to the relationships between *girls* and the *teacher*.

The findings obtained in the International Association for the Evaluation of Educational Achievement (IEA) reading literacy study (Elley, 1992; Lundberg and Linnakylä, 1992) and the Programme for International Student Assessment (PISA) (OECD, 2001b) regarding gender differences can be compared to the results from this study, where almost all teachers are female but work together with male grandparents. This could explain why more girls seek help from teachers while more boys turn to granddads.

There are some gender differences reported in the PISA (OECD, 2001b) study regarding 15-year-olds: girls tend to achieve higher levels of reading literacy and, in half the countries tested, boys perform better in mathematics. In science there are no significant gender difference in 24 of the OECD countries. The relatively high levels of reading literacy for girls could, according to the report, be attributed to the fact that girls spend more time reading for enjoyment than boys. This was also reported in the IEA 1990-1991 study (Elley, 1992) where it was found that girls read books voluntarily to a greater extent than boys. Boys read comics and maps more often than girls. In the IEA Third International Mathematics and Science Study (TIMSS) report on *Science Achievement in the Primary School Years* (Martin, Mullis, Beaton, Gonzalez, Smith and Kelly, 1997) boys had significantly higher levels of performance than girls in 11 countries at the fourth grade. These differences were smaller in the third grade and gender differences were much less pervasive in lower grades than in grades eight and nine. In the TIMSS study on *Mathematics Achievement in the Primary School Years* (Mullis, Martin, Beaton, Gonzales, Smith and Kelly, 1997) boys and girls in most countries had approximately the same average score

at both third and fourth grades. The few significant differences tended to favour boys rather than girls.

Elley (1992) used the findings from the IEA 1990-1991 study of reading literacy to suggest that boys identify better with the values of male teachers than with female teachers. There is also some support in this study for the impact of male or female teachers. For example, nine-year-old girls were ahead of boys in the five countries where 71 per cent of the primary school teachers were female.

Lundberg and Linnakylä (1992) and Lundberg (1994), using the same IEA study of reading literacy, further investigated the relationship between gender differences and teachers. They studied nine-year-olds and found that almost all teachers were female in Slovenia, Hungary, Germany (East), Sweden, Italy and Portugal. There was a weak correlation between higher average reading scores in educational systems with a high percentage of female teachers. In this study gender matches between pupils and teachers were also investigated. When the whole international dataset was analysed a significant interaction indicated a weak gender match advantage between male teachers and boys and female teachers and girls. In three countries (Ireland, Singapore and Spain) there was a significant correlation indicating that girls had higher scores when they had female teachers and boys performed better with male teachers.

Purves and Elley (1994) analysed the scoring variance between boys and girls in the IEA studies. The percentage of female teachers in each national sample was correlated with the variance between boys' and girls' total achievement scores in the sample countries. For example, Purves and Elley (1994) found a positive correlation between the proportion of female teachers and higher test scores among nine-year-old girls. However, they cautioned that there are other factors, both cultural and pedagogical, that are also important to consider when explaining the gender gap in student achievement.

The suggested differences in learning processes outlined in the PISA study (OECD, 2001b) may indicate why gender differences in social capital entities can also be implicated. In the PISA study (OECD, 2001b) differences in gender learning processes are explained as follows:

“... in almost all countries with statistically significant gender differences, females report using control strategies more often than males. This suggests that females are more likely to adopt a self-evaluating perspective during the learning process though, in most countries, they could benefit from training in the use of elaboration strategies. Males on the other hand, could benefit from

more general assistance in planning, organizing and structuring learning activities” (OECD, 2001, p.133).

However, it is stressed in the PISA study (OECD, 2001b) that these issues need to be further explored, especially the investigation of the relationship between gender performance and habits, attitudes and self-image of young boys and girls.

In summary, then, there is increased social capital for the pupils but there are differences between boys and girls with regard to the composite of the entities of social capital.

Social capital and granddads

For most of the male senior citizens in this population, there are two main reasons for electing to work as a granddad in a school. They were either unemployed or retired but still had a desire to have an active role in society and they wished to support and assist pupils in schools.

Returning to the school world after 40 or 50 years, they had gained a variety of different experiences during the intervening years. Some of the granddads report that they are quite satisfied with the present-day school environment while others report that they are shocked by it. There are granddads who report that they experience a lack of that respect for older people on the part of young people that they had been expected to show when they themselves had attended school. They also express a feeling that the school of today is chaotic with unacceptably high levels of noise and a lack of discipline which they consider to be worse than they could have ever imagined before starting work as a granddad. When trying to understand this, these granddads describe such differences between then and now as being a feature of a “freer” school and that pupils today are restless and lack concentration. Therefore, in their work, they try to influence the pupils in a positive way by being available and by supporting and assisting them. Although this environment makes their work harder and more demanding, they still enjoy it because they feel needed and have a social life and are gaining new experiences. They really feel that they are regarding as belonging together with the other professionals in the school. The granddads indicate that they appreciate the help and support they are given by the teachers and by the granddad association, as they have had the opportunity, to some considerable extent, to discuss their work with the teachers, which indicates the existence of good communication.

The granddad is able to perceive more opportunities for co-operation between the pupils than is the case for the teacher. This might be a result of the fact that the granddad spends some of his time with the pupils during breaks and lunchtime.

In summary, it could be said that although granddads consider their work to be demanding, they still find it rewarding because of the social network with the staff and pupils and the positive responses of the pupils. All this indicates growth of social capital in the school situation for the granddads themselves.

Social capital and teachers

Most of the teachers in the present study are in favour of there being a granddad in the school. When initially approached about this matter, they had been immediately willing to have a granddad working in their class. In their opinion, it is important that there are two adults in the classroom because this prevents violence, helps resolve conflicts and provides support for both the pupils and the teacher. As the intergenerational intervention mainly concerns the pupils and the granddads, here the social capital of the teachers has not been studied to the same extent as is the case for social capital between the other actors in the classroom. With regards to norms and structures and cooperative methods, it should be noted that it is indicated that the social capital between the pupils themselves is of importance to the social capital between the granddad and the pupils, which in turn influences the social capital between the pupils and the teacher.

The responses of the teachers indicate that they appreciate the assistance provided by the granddads, although it would appear that one of them feels that other forms of assistance are required in schools.

Adults in the schools

The social capital between pupils is important to the pupils involved and has an impact on the relationships between the pupils and the adults in the classroom.

The responses from both the teachers and the granddads tend to undervalue the importance of their own work, compared to the views expressed in the responses from the pupils who state that they appreciate the work of the adults exactly because of the individual assistance and support with which they are provided by this means in the classrooms. The

cause of this discrepancy might be the negative tendencies in public opinion regarding schools and the manner in which the adults there carry out their responsibilities. While public opinion has a great deal to say about what is believed should be done in schools, there is very little positive public appreciation of the actual work that is being carried out in real-life by teachers in their classrooms.

10.3 Implications for theory

The significance of the results of the present study could be seen as the *contribution they make to research knowledge* regarding social capital and lifelong learning, as these concepts relate to practice and theory.

It is possible for the cumulative intensity of growth of social capital during the transmission of knowledge, skills and attitudes between the pupils and the older men working as granddads, and vice versa, to constitute a solid foundation for basic education, since a reduction in disruptive behaviour, and consequently a “safer” environment in the school, is brought about. It is in this way that the results of the study are to be considered as contributing to more *effective schooling*.

The study should also be considered as assisting in the clarification of the *conceptualisation* of lifelong learning, intergenerational learning, and social capital and the relationships between these concepts. The study shows:

- a new view of social capital in schools;
- a development of the theoretical concept of intergenerational learning;
- an establishment of links between theory and practice regarding these three concepts.

10.4 Some implications

One important factor with regard to learning in international and national contexts in the future concerns the ongoing changes in the demography of many countries, such as ageing populations. It is possible for those in the older generation who remain active and who desire to participate in community life in some way, to contribute to improvements in the quality

of life, both for themselves and for the community as a whole. Thus the present study offers a contribution to policy formation through:

- drawing attention to the needs of senior citizens with regard to opportunities for establishing relationships and social networks through work;
- highlighting the needs of school-age children and their relationships with adults, especially senior citizens;
- underscoring the necessity of providing opportunities for teachers to participate in cooperative activities with some other adult in the social context of school learning.

The results from the example of the granddad intervention show that it is possible to measure indicators of social capital. Therefore, this approach should be considered also in other areas and in other projects.

It is important to stress the fact that the granddads do not do the work of the teachers or any other staff. As indicated in Chapter 9, granddads generally observe that they do not get involved, or try to change anything, in the education context. As a rule, they are given free reign and are quite independent in their work. This is important because the tight work schedules of principals and teachers do not allow them to provide much supervision to the granddads. They are supposed to determine their general role in the school after discussion with the principal but they identify specific responsibilities in discussions with teachers. Moreover, if a teacher asks for support in different areas the granddad will generally attempt to comply. The overall aim of the granddads is to play a beneficial role for children in schools. However, most of them also see happy teachers as a benefit for the children so they try to be of assistance wherever they can. On a larger scale this could mean a better working environment for teachers.

Granddads do not take specific responsibility for children with special needs. They are in the schools for the benefit of all children, and they support every child but they do not interfere with teachers who are experts for children with special needs. This is a policy of the association for the granddads and it guarantees the integrity of both granddads and teachers. The results of this study also show the different feelings of these two groups: teachers feel they are unable to sufficiently help their pupils in

the learning process; and the granddads feel they are unable to sufficiently help and comfort pupils with their problems.

When granddads work in the schools they can decrease the workload for the teachers but in order for this intervention to be successful it is extremely important for teachers to want a colleague in the classroom with another background, and thus complementary skills and knowledge, than themselves. This also makes the school more open to society - open for both formal and informal learning, and supportive of a society characterized by lifelong and lifewide learning.

One teacher articulated that she was not sure whether or not she wanted resources other than those contributed by the granddad. Neither granddad intervention nor any other adult project in the schools should be funded by resources earmarked for learning, e.g. for books and teachers salaries. The key is to provide funds or human resources for increasing social capital from other assets in society.

10.5 Implications for future research

The goal of this study has been to investigate an intergenerational intervention which has been taking place on a regular basis for some time. Therefore the focus has been on those who have participated most in this particular intervention, that is to say, the pupils and the granddads. Since the general framework for this study has not, unfortunately, permitted a closer investigation of the expectations of the teachers and their experiences, this continues to remain a matter for future research. Similarly, research also needs to be carried out into the prerequisites for the effect of the employment of a granddad in a school on all staff and all pupils.

The granddad project constitutes a most appropriate subject for investigation on intergenerational interventions since a primary prerequisite for this research has been that the intervention should have been in operation on a regular basis for some time. Naturally, there are grandmothers to be found working in the schools, both in the greater Stockholm area and in other parts of the country, but it has not been appropriate to include this intervention in the present study since it has not been organized on a similarly regular basis and comprehensive manner. It is to be hoped that the material presented in the present study will be of use in any future study of the effect of the grandmothers on the pupils in school.

Although the present study was not designed to reveal gender differences, nonetheless it has become clear that the results revealed that there are different patterns for boys and girls with regard to social capital, in that boys more often than girls turn for assistance to adults (both teachers and granddads) while girls largely deal with difficulties themselves, together with one or more friends. The age of the pupils is of considerable significance with regard to their relationships with adults at school. However, the nature of the database in this study does not allow for an evaluation of the manner in which age influences these relationships and the social capital between different generations. It remains for future research to generate an appropriate database in order to answer the question as to the significance of age with regard to social capital in the classroom.

There are two aspects of future research that might reveal more about intergenerational transmission. The first of these would be a longitudinal study carried out as a follow-up to the present study. Many of those granddads who have participated in the present study are still active in the same schools and continue to meet new pupils during the course of their work there. Through making use of the instruments that have been used in the present study to measure the effect of the subsequent work of these granddads with these pupils, it would be possible both to gain more data and to investigate the impact over time of such interventions. One advantage that would be derived from having more data available is that this would enable an investigation to be carried out into the possible effects of age, for both boys and girls. Another advantage would be to enable in-depth studies to be carried out on the impressions of teachers with regard to the granddad intervention and for interviews to be carried out with focus group of pupils to provide more in-depth information.

The second aspect of future research would be to carry out a study using an experimental design whereby data on background variables would be collected before the inception of the intervention. Information would be collected on relevant indicators to attempt to measure the extent, if any, to which monetary capital is saved by introducing a granddad intervention into a school. The cognitive outcome of the granddad intervention would subsequently be measured and the outcome with regard to social capital in each participating school would then be measured and compared across schools, following the pattern of the investigation carried out by Stockholm Local Authority (Study B). Thus, five schools would be included in the study, where granddads would be introduced as an intergenerational intervention, with the subsequent impact of this intervention being investigated in the form of questionnaires, both for those pupils included in

the intergenerational intervention and for those pupils who would not be included. In-depth interviews would also form part of this study in order to investigate in more detail what the granddad intervention might mean for teachers and what part age might play with regard to the possible impacts of the intergenerational intervention. Each of these five schools would be treated as a separate case study, where the possible impacts of the granddad intervention on social capital in each school would be investigated in a study using qualitative methodology in the form of in-depth interviews with core actors and with focus groups of pupils.

10.6 Conclusion

Any increases in social capital derived from the two-way transmission of, skills, attitudes, norms and values between senior citizens, the granddads, and the pupils may well provide a solid and substantial foundation for basic education in the future, given the decrease in disruptive behaviour among the pupils and the emergence, consequently, of a “safer” school environment. It is in this sense that it is hoped that the present study will be considered as making a contribution to more effective schooling.

Another finding is that cooperation between the adults is important for them themselves and that their work in the school results in a better quality of life for the granddads in providing a more extensive social network and a greater sense of being of some importance and needed. These results support the prediction that the conceptual model works in practice and that social capital is nurtured and increased in the intergenerational intervention in the classrooms.

It would appear that, because of the recent extensive changes in Swedish society in general, and in particular in the schools, there has arisen a growing need for a greater number of adults to be present in the schools. Thus the male senior citizens who are working as granddads in schools in Sweden are obviously fulfilling a need. In a lifelong learning perspective, the learning that is taking place in the classrooms in schools where there is granddad intervention provides opportunities for formal and informal learning on the part of members of both the younger generation and of older generations. This might constitute a starting point for a new generation in a learning society.

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Appendix A

Input into the LISREL 8.50 Computer Program

Model A

DA NI=45 NO=275 MA=PM

LA

AGE	GIJOCLE	GIJOBRE	GIJOLUE	GIJOEXE
GIJOADE	GIJOSOE	GIJODIE	GIJONSE	GIJOASE
GIJOSTE	GIJOOSE	GIJOGEE	GIJOCOE	GIJOTAE
GIJOUSE	GIJOGEE	GIOVIE	SCNSSEE	SCNSFPE
SCNSSRE	SCNSORE	SCNSLAE	SCTRDGE	SCTRLAE
SCTRKAE	SCTRETE	SCTRFPE	SCCOLDE	SCTRKPE
SCTRLPE	SCTRMOE	SCCOISE	SCMENLE	SCMECPE
SCMENEE	SCMENOE	SCMECEE	SCMECRE	SCMENFE
SCMENAE	SCMEDIE	SCMECCE	SCMIUKE	SCMISE

KM=BOYMET.COR

MO NY=9 NE=3 NK=2 NX=3 GA=FU, FR BE=SD PH=FU, FR TD=DI, FR TE=SY

SE

27 21 19 7 6 8 29 31 25
1 22 23/

LE

SC1 SC2 SC3

LK

AGE SCNS

FR LY(2,1) LY(3,1)

FR LY(5,2) LY(6,2)

FR LY(8,3) LY(9,3)

FR LX(3,2)

FI PH(2,1)

FI GA(2,2)

FI BE(3,2)

FR TE(1,5)

FI TD(1,1)

VA 1. LX(1,1) LX(2,2)

VA 1. LY(1,1) LY(4,2) LY(7,3)

PD

OU MI SE SS EF ND=3 AD=OFF

Model B

DA NI=45 NO=249 MA=PM

LA

AGE	GIJOCLE	GIJOBRE	GIJOLUE	GIJOEXE
GIJOADE	GIJOSOE	GIJODIE	GIJONSE	GIJOASE
GIJOSTE	GIJOOSE	GIJOGEE	GIJOCOE	GIJOTAE
GIJOUSE	GIJOGEE	GIOVIE	SCNSSEE	SCNSFPE
SCNSSRE	SCNSORE	SCNSLAE	SCTRDGE	SCTRLAE
SCTRKAE	SCTRETE	SCTRFPE	SCCOLDE	SCTRKPE
SCTRLPE	SCTRMOE	SCCOISE	SCMENLE	SCMECPE
SCMENEE	SCMENOE	SCMECEE	SCMECRE	SCMENFE
SCMENAE	SCMEDIE	SCMECCE	SCMIUKE	SCMISE

KM=GIRLMET.COR

MO NY=9 NE=3 NK=2 NX=3 GA=FU, FR BE=SD PH=FU, FR TD=DI, FR TE=SY

SE

27 21 19 7 8 6 29 31 25
1 22 23/

LE

SC1 SC2 SC3

LK

AGE SCNS

FR LY(2,1) LY(3,1)

FR LY(5,2) LY(6,2)

FR LY(8,3) LY(9,3)

FR LX(3,2)

FI PH(1,2)

FI GA(1,1) GA(2,1) GA(2,2)

FI BE(3,2)

FR TE(8,4)

FI TD(1,1)

VA 1. LX(1,1) LX(2,2)

VA 1. LY(1,1) LY(4,2) LY(7,3)

PD

OU MI SE SS EF ND=3 AD=OFF

Model C

DA NI=45 NO=249 MA=PM

LA

AGE	GIJOCLE	GIJOBRE	GIJOLUE	GIJOEXE
GIJOADE	GIJOSOE	GIJODIE	GIJONSE	GIJOASE
GIJOSTE	GIJOOSE	GIJOGEE	GIJOCOE	GIJOTAE
GIJOUSE	GIJOGEE	GIOVIE	SCNSSEE	SCNSFPE
SCNSSRE	SCNSORE	SCNSLAE	SCTRDGE	SCTRLAE
SCTRKAE	SCTRETE	SCTRFPE	SCCOLDE	SCTRKPE
SCTRLPE	SCTRMOE	SCCOISE	SCMENLE	SCMECPE
SCMENEE	SCMENOE	SCMECEE	SCMECRE	SCMENFE
SCMENAE	SCMEDIE	SCMECCE	SCMIUKE	SCMISE

KM=GIRLMET.COR

MO NY=9 NE=3 NK=2 NX=5 GA=FU, FR BE=SD PH=FU, FR TD=DI, FR TE=SY

SE

27 21 19 7 8 6 31 29 25
22 23 38 39 35/

LE

SC1 SC2 SC3

LK

SCNS METHOD

FR LY(2,1) LY(3,1)

FR LY(5,2) LY(6,2)

FR LY(8,3) LY(9,3)

FR LX(2,1)

FR LX(4,2) LX(5,2)

FI GA(2,2)

FR TE(4,7)

FI TD(1,1)

VA 1. LX(1,1) LX(3,2)

VA 1. LY(1,1) LY(4,2) LY(7,3)

PD

OU MI SE SS EF ND=3 AD=OFF

Model D

DA NI=45 NO=275 MA=PM

LA

AGE	GIJOCLE	GIJOBRE	GIJOLUE	GIJOEXE
GIJOADE	GIJOSOE	GIJODIE	GIJONSE	GIJOASE
GIJOSTE	GIJOOSE	GIJOGEE	GIJOCOE	GIJOTAE
GIJOUSE	GIJOGEE	GIOVIE	SCNSSEE	SCNSFPE
SCNSSRE	SCNSORE	SCNSLAE	SCTRDGE	SCTRLAE
SCTRKAE	SCTRETE	SCTRFPE	SCCOLDE	SCTRKPE
SCTRLPE	SCTRMOE	SCCOISE	SCMENLE	SCMECPE
SCMENEE	SCMENOE	SCMECEE	SCMECRE	SCMENFE
SCMENAE	SCMEDIE	SCMECCE	SCMIUKE	SCMISE

KM=BOYMET.COR

MO NY=9 NE=3 NK=2 NX=5 GA=FU, FR BE=SD PH=FU, FR TD=DI, FR TE=SY

SE

27 19 21 7 8 6 31 29 25
22 23 38 39 35/

LE

SC1 SC2 SC3

LK

SCNS METHOD

FR LY(2,1) LY(3,1)
FR LY(5,2) LY(6,2)
FR LY(8,3) LY(9,3)

FR LX(2,1)
FR LX(4,2) LX(5,2)

FI GA(2,2) GA(3,2)
FI BE(2,1) BE(3,2)

FR TE(6,1)
FI TD(1,1)

VA 1. LX(1,1) LX(3,2)
VA 1. LY(1,1) LY(4,2) LY(7,3)

PD

OU MI SE SS EF ND=3 AD=OFF

Appendix B.

Pupils' Questionnaires

Thank you for participating in this research regarding the "granddad concept" The purpose is to describe and analyze the effect of the granddad in Swedish schools. By answering this questionnaire you contribute to our knowledge of the work of the granddads. This questionnaire is given to all pupils who have a granddad in their classroom

Please tick the appropriate box

1.School.....**2.Grade**.....

3. Age.....

4.Nationality.....

5. Girl **Boy**

Granddad is:

	Never	Sometimes	Often	Always
6. present in the classroom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. present during breaks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. present in dining hall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. present at excursions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. assisting everybody	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. resolving conflicts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. preventing violence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. imposing restrictions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. assisting the teacher when teaching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. supporting "disruptive" p.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. supporting one "distr." p.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. helping pupils in various subjects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. talking and comforting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. talking about his experiences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. using his experiences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. taking care of a group of pupils.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. substituting for the teacher	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. others	<input type="checkbox"/>			

Please specify.....

I am	Very dissatisfied	Rather dissatisfied	Neither nor	Rather satisfied	Very satisfied
24. With co-operation between pupils in the classroom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. With co-operation between girls and boy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. With co-operation between pupils during breaks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. With order and rules	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. With quiet and peace in the classroom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. With individual support and assistance from granddad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. With individual support and assistance from teacher	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. With individual support from another pupil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. With pupils feeling completely safe in school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. With girls and boys equal possibilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. With how I can discuss with teachers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. With how I can talk to another pupil when I have a problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. With how I can talk to the teacher when there is a difficulty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. With how I can talk to granddad when there is a difficulty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. With how I receive information from school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How often is following method used

	Never	Sometimes	Often	Very often
39. The teacher determines what is to be learned.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. The pupils are working with projects outside the school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. The pupils use textbooks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42. The pupils work with other material.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43. The pupils work on themes in groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44. The pupils participate in plays	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45. The teacher asks questions and the pupils answer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46. The teacher talks and the pupils take notes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47. The teacher invite to discussions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48. The pupils participate in activities outside school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

49. How often do you meet your friends outside your home?

- Almost every day (4 or 5 days a week)
- Some days (1-3 days a week)
- Some days every month
- Never or almost never

Appendix C

Product Moment Correlation coefficients for boy and girl data set

The lower half of the correlation matrix is entered. Read each row up to and including the diagonal element. The product correlation coefficients are estimated using the PRELIS 2.50 computer program and 45 variables from the pupil population in the granddad study. The data set is divided into two, one for the girls and one for the boys. The rank order of the variables in the matrix is as follows (See Chapter 7 for key to the mnemonics):

1 AGE	2 GIJOCLE	3 GIJOBRE	4 GIJOLUE	5 GIJOEXE
6 GIJOADE	7 GIJOSOE	8 GIJODIE	9 GIJONSE	10 GIJOASE
11 GIJOSTE	12 GIJOOSE	13 GIJOGEE	14 GIJOCOE	15 GIJOTAE
16 GIJOUSE	17 GIJOGEE	18 GIOVIE	19 SCNSSEE	20 SCNSFPE
21 SCNSSRE	22 SCNSORE	23 SCNSLAE	24 SCTRDE	25 SCTRLAE
26 SCTRKAE	26 SCTRETE	27 SCTRPE	28 SCCOLDE	29 SCTRKPE
31 SCTRLPE	32 SCTRMOE	33 SCCOISE	34 SCMENLE	35 SCMECPE
36 SCMENEE	37 SCMENOE	38 SCMECEE	39 SCMECRE	40 SCMENFE
41 SCMENAE	42 SCMEDIE	43 SCMECCE	44 SCMIUKE	45 SCMISE

Girl Correlation Matrix

1.000					
-0.106	1.000				
-0.098	-0.010	1.000			
-0.137	0.576	0.158	1.000		
-0.061	0.404	0.109	0.355	1.000	
-0.196	0.235	0.255	0.332	0.099	1.000
-0.227	0.158	0.320	0.291	0.170	0.588
-0.006	0.210	0.279	0.337	0.260	0.592
-0.304	0.163	0.189	0.280	0.215	0.516
-0.294	0.366	-0.140	0.367	0.218	0.459
-0.091	0.216	0.105	0.281	0.253	0.405
0.025	0.229	0.101	0.160	0.234	0.099
-0.314	0.289	0.060	0.373	0.133	0.601
-0.433	0.210	0.247	0.322	0.165	0.658
0.217	0.149	0.195	0.182	0.120	0.286
0.107	0.299	0.072	0.174	0.079	0.362
-0.031	0.161	0.109	0.299	0.040	0.408
0.167	0.187	0.141	0.329	0.315	0.333
-0.175	0.037	0.038	0.096	0.126	0.093
-0.032	-0.034	0.094	0.085	0.022	-0.027
-0.133	0.116	0.042	0.130	0.057	0.183
-0.366	-0.010	0.084	0.142	0.129	-0.001
-0.110	0.084	0.182	0.145	0.167	-0.015
-0.358	0.181	0.233	0.299	0.164	0.565
-0.232	0.030	-0.019	-0.010	0.154	0.045
0.072	0.008	-0.086	-0.046	0.098	-0.196
-0.329	0.101	0.060	0.145	0.046	0.282
-0.136	0.165	0.076	0.125	0.218	-0.076

-0.233	0.048	0.066	0.216	0.106	0.102
-0.058	-0.067	0.022	-0.028	0.064	0.050
-0.488	-0.020	0.133	0.119	0.143	0.035
-0.471	0.163	0.317	0.261	0.163	0.412
-0.373	0.097	0.058	0.224	-0.057	0.235
-0.206	-0.008	-0.094	-0.072	0.138	0.030
0.125	-0.042	0.168	0.089	-0.131	0.164
0.078	-0.050	-0.060	0.001	-0.086	0.022
-0.133	-0.154	-0.009	-0.052	0.035	-0.039
-0.029	0.027	-0.012	0.137	0.021	0.115
-0.191	0.060	0.175	0.206	0.125	0.236
-0.142	0.147	0.154	0.131	0.145	0.063
0.416	-0.044	0.092	-0.033	0.005	-0.026
-0.168	0.003	0.165	0.183	0.042	0.131
-0.144	0.075	0.174	0.158	-0.029	0.202
-0.109	0.033	-0.083	-0.021	-0.100	-0.151
-0.048	-0.046	0.070	-0.039	-0.072	-0.086

1.000

0.666	1.000				
0.478	0.453	1.000			
0.376	0.223	0.391	1.000		
0.407	0.383	0.357	0.393	1.000	
0.239	0.357	0.189	0.230	0.587	1.000
0.398	0.403	0.421	0.564	0.361	0.194
0.625	0.460	0.489	0.513	0.399	0.286
0.313	0.415	0.216	0.118	0.105	0.258
0.385	0.352	0.251	0.226	0.304	0.259
0.350	0.344	0.295	0.278	0.393	0.209
0.202	0.323	0.177	0.167	0.292	0.193
0.189	0.188	0.103	0.202	-0.059	-0.054
-0.076	0.082	-0.048	0.063	-0.061	0.070
0.082	0.133	0.094	0.211	0.061	0.067
0.071	0.032	0.123	0.163	-0.041	-0.047
0.052	0.043	0.033	0.058	-0.067	0.018
0.520	0.408	0.446	0.446	0.312	0.247
-0.095	-0.151	0.006	0.157	-0.028	-0.038
-0.153	-0.100	-0.067	-0.037	-0.084	0.109
0.207	0.145	0.162	0.331	0.097	0.130
0.090	-0.003	0.033	0.069	-0.055	-0.029
0.079	0.067	0.055	0.144	0.198	0.218
0.049	-0.037	-0.009	-0.053	0.048	0.058
0.189	-0.044	0.129	0.134	0.105	0.032
0.549	0.264	0.376	0.346	0.306	0.192
0.169	0.121	0.123	0.291	0.144	0.118
0.046	0.098	0.209	0.292	0.197	0.163
0.022	0.160	0.010	0.156	0.090	-0.019
-0.073	-0.025	0.022	0.035	-0.014	-0.077
0.088	0.051	0.124	0.098	0.022	-0.007
0.117	0.085	0.084	0.255	0.072	0.074
0.116	0.147	0.117	0.106	0.174	0.120
0.029	0.045	0.075	0.081	0.309	0.251
-0.094	0.164	-0.122	-0.325	0.040	0.195
0.089	0.143	0.153	0.103	0.263	0.216

0.085	0.167	0.133	0.198	0.071	0.141
-0.234	-0.230	-0.075	0.001	-0.139	-0.157
-0.026	-0.057	-0.087	-0.153	-0.132	-0.167

1.000

0.566	1.000				
0.250	0.308	1.000			
0.424	0.301	0.551	1.000		
0.458	0.395	0.357	0.442	1.000	
0.249	0.255	0.283	0.317	0.437	1.000
0.094	0.319	0.187	-0.056	-0.033	0.098
0.016	0.098	-0.011	-0.123	-0.042	0.014
0.173	0.267	0.053	0.005	0.121	0.190
0.116	0.245	-0.086	-0.073	0.069	0.028
-0.019	0.176	-0.012	-0.017	0.007	0.064
0.494	0.673	0.269	0.297	0.420	0.278
0.035	0.168	-0.132	-0.049	-0.020	0.000
-0.133	-0.055	-0.036	-0.151	0.010	-0.044
0.279	0.462	0.031	0.038	0.110	0.104
0.011	0.162	-0.072	0.046	0.009	0.048
0.102	0.268	0.052	-0.031	0.118	0.004
-0.136	0.120	0.057	-0.094	-0.038	-0.066
0.081	0.318	-0.057	-0.171	0.086	-0.100
0.383	0.658	0.267	0.180	0.367	0.154
0.233	0.396	0.021	0.027	0.207	0.090
0.052	0.191	0.018	0.031	0.029	-0.042
0.093	0.209	0.112	-0.022	0.139	-0.005
0.035	0.117	0.085	0.053	0.100	-0.021
0.061	0.136	0.084	-0.024	0.103	-0.081
0.142	0.271	0.207	-0.027	0.294	-0.005
0.095	0.308	0.003	-0.052	0.159	0.152
0.043	0.211	0.035	0.041	0.043	0.180
-0.118	-0.208	0.130	0.002	0.103	0.125
0.092	0.227	0.104	0.087	0.252	0.200
0.182	0.277	0.059	0.123	0.207	0.249
-0.056	-0.133	-0.215	-0.171	-0.085	-0.156
-0.083	-0.124	-0.135	-0.090	-0.148	-0.161

1.000

0.579	1.000				
0.499	0.509	1.000			
0.366	0.331	0.238	1.000		
0.355	0.288	0.270	0.593	1.000	
0.332	0.211	0.438	0.348	0.328	1.000
0.275	0.405	0.351	0.492	0.389	0.354
0.269	0.349	0.340	0.220	0.173	0.189
0.516	0.363	0.513	0.488	0.392	0.537
0.313	0.339	0.344	0.430	0.409	0.293
0.360	0.431	0.254	0.415	0.305	0.375
0.261	0.251	0.404	0.173	0.050	0.294
0.428	0.400	0.283	0.496	0.295	0.419
0.355	0.191	0.230	0.442	0.318	0.735
0.392	0.387	0.335	0.437	0.407	0.527
0.257	0.151	0.174	0.187	0.107	0.208

0.124	0.197	0.142	0.128	0.139	0.117
-0.029	0.135	0.074	0.034	0.035	0.069
0.168	0.096	0.035	0.208	0.106	0.145
0.286	0.304	0.118	0.112	-0.011	0.303
0.197	0.195	0.170	0.155	0.138	0.149
0.120	0.106	0.144	0.171	0.038	0.228
0.021	0.059	-0.061	-0.109	-0.135	-0.077
0.181	0.237	0.155	0.244	0.042	0.234
0.228	0.291	0.331	0.222	0.113	0.248
-0.190	-0.162	-0.176	-0.012	-0.050	-0.127
-0.170	-0.201	-0.152	-0.057	-0.010	-0.122

1.000

0.327	1.000				
0.265	0.180	1.000			
0.342	0.307	0.459	1.000		
0.516	0.317	0.435	0.284	1.000	
0.277	0.529	0.219	0.253	0.239	1.000
0.529	0.274	0.410	0.365	0.698	0.333
0.230	0.077	0.487	0.269	0.454	0.232
0.432	0.271	0.556	0.302	0.524	0.272
0.210	0.119	0.184	0.149	0.107	0.117
0.047	0.011	0.072	0.004	0.137	-0.076
0.055	0.077	0.126	0.074	0.121	0.126
0.316	0.007	0.157	0.142	0.199	0.035
0.167	0.247	0.236	0.085	0.275	0.094
0.075	0.085	0.285	0.121	0.272	0.233
0.208	0.200	0.052	0.148	0.291	0.120
-0.122	0.161	-0.143	-0.076	0.107	0.044
0.153	0.075	0.254	0.193	0.465	0.138
0.116	0.089	0.340	0.175	0.299	0.139
-0.090	-0.178	0.055	0.067	-0.087	-0.312
-0.116	-0.165	-0.028	-0.064	-0.126	-0.401

1.000

0.689	1.000				
0.457	0.531	1.000			
0.109	0.161	0.195	1.000		
0.065	0.157	0.225	0.191	1.000	
-0.006	0.043	0.126	0.148	0.083	1.000
0.223	0.198	0.325	0.242	0.223	0.319
0.241	0.280	0.235	0.021	0.286	0.246
0.284	0.296	0.339	-0.013	0.182	0.028
0.216	0.260	0.264	0.400	0.277	0.137
-0.103	-0.170	-0.020	-0.089	0.153	0.177
0.255	0.266	0.410	0.239	0.269	0.211
0.183	0.224	0.420	0.064	0.187	0.202
0.031	-0.031	-0.130	-0.101	-0.072	0.026
-0.096	-0.010	-0.132	-0.161	-0.017	0.116

1.000

0.279	1.000		
0.071	0.336	1.000	
0.208	0.154	0.127	1.000

0.019	0.129	0.136	0.171	1.000	
0.244	0.315	0.378	0.420	0.171	1.000
0.118	0.213	0.375	0.298	0.225	0.607
0.046	-0.055	-0.232	-0.065	-0.218	-0.065
0.070	-0.092	-0.267	-0.097	-0.006	-0.117
1.000					
-0.125	1.000				
-0.227	0.631	1.000			

Boy correlation Matrix

1.000					
-0.041	1.000				
-0.194	0.072	1.000			
0.075	0.507	0.115	1.000		
0.011	0.294	0.054	0.465	1.000	
0.168	0.321	-0.017	0.311	0.305	1.000
0.229	0.149	0.113	0.252	0.278	0.603
0.248	0.176	0.079	0.084	0.248	0.519
0.057	0.190	0.114	0.101	0.202	0.328
0.020	0.402	0.013	0.219	0.207	0.428
0.188	0.278	0.062	0.348	0.271	0.458
0.216	0.192	-0.066	0.203	0.214	0.275
0.105	0.370	-0.060	0.332	0.326	0.545
-0.119	0.194	0.221	0.248	0.280	0.543
0.287	0.053	0.125	0.173	0.108	0.328
0.274	0.162	0.095	0.299	0.160	0.413
0.097	0.184	0.028	0.296	0.210	0.439
0.256	0.043	0.034	0.196	0.334	0.355
-0.002	0.096	-0.040	0.040	-0.001	0.112
0.006	-0.112	0.084	-0.073	0.117	0.116
-0.122	-0.037	0.024	-0.039	0.238	0.123
-0.073	-0.001	0.044	0.061	0.083	0.084
0.026	-0.031	0.072	-0.019	0.115	0.150
0.027	0.174	0.055	0.212	0.198	0.468
-0.186	0.068	0.035	0.028	0.015	0.069
-0.067	-0.163	0.006	-0.123	0.071	0.072
-0.187	0.163	0.058	0.030	0.126	0.226
-0.118	0.025	0.019	-0.002	0.040	0.080
-0.098	0.174	0.097	0.096	0.042	0.114
-0.022	0.020	-0.051	0.057	0.016	0.096
-0.165	0.004	0.096	0.036	0.019	0.113
-0.108	0.180	0.191	0.256	0.113	0.415
-0.233	0.133	0.218	0.150	0.104	0.159
-0.134	0.050	0.012	0.077	0.098	0.043
0.145	0.012	0.060	0.106	0.065	0.183
0.201	-0.078	-0.053	-0.004	0.046	0.032
0.066	0.052	-0.046	0.073	0.152	0.038
-0.034	0.043	0.071	0.022	0.049	0.146
0.009	0.061	0.054	0.141	0.131	0.130
-0.018	0.035	-0.044	0.128	0.026	0.151
0.312	-0.007	0.119	0.173	0.087	0.114
0.066	0.058	0.109	0.105	0.078	0.148
-0.102	-0.003	-0.029	-0.059	-0.128	0.020
-0.045	0.024	0.002	0.022	-0.002	0.081
0.029	-0.058	0.034	-0.075	-0.029	0.048
1.000					
0.574	1.000				
0.300	0.325	1.000			
0.357	0.308	0.315	1.000		
0.405	0.417	0.327	0.335	1.000	
0.359	0.447	0.252	0.269	0.648	1.000

0.467	0.450	0.276	0.568	0.454	0.370
0.466	0.325	0.339	0.300	0.388	0.304
0.283	0.352	0.229	0.215	0.229	0.309
0.362	0.388	0.187	0.231	0.354	0.438
0.408	0.296	0.190	0.259	0.319	0.330
0.328	0.226	0.071	0.121	0.312	0.255
0.115	0.107	0.137	0.170	0.045	0.124
0.136	0.053	0.005	0.084	0.055	0.150
0.166	0.017	0.075	0.152	0.080	0.106
0.037	0.033	0.040	0.085	0.109	0.147
0.052	0.067	0.104	0.061	0.101	0.155
0.363	0.441	0.414	0.443	0.336	0.283
0.012	0.013	0.094	0.112	-0.031	0.064
0.015	-0.020	0.252	0.082	0.099	0.081
0.099	0.027	0.204	0.221	0.065	0.050
0.022	0.141	0.197	0.143	0.104	0.103
0.126	0.123	0.280	0.192	0.070	0.090
-0.065	-0.064	0.052	0.070	-0.004	0.010
0.083	0.052	0.069	0.138	0.028	0.031
0.319	0.342	0.249	0.209	0.341	0.251
0.218	0.069	0.175	0.214	-0.002	-0.076
0.105	0.074	0.131	0.049	0.079	0.047
0.175	0.090	0.172	0.102	0.240	0.164
0.072	-0.069	0.112	0.034	0.009	0.005
0.033	-0.033	0.035	0.181	-0.019	-0.004
0.206	0.093	0.108	0.298	0.152	0.109
0.117	0.006	-0.030	0.175	0.194	0.215
0.079	-0.006	0.002	0.087	0.108	0.106
0.193	0.201	0.064	0.070	0.140	0.131
0.207	0.110	0.187	0.155	0.152	0.119
0.020	-0.056	0.117	0.133	-0.043	-0.048
0.064	-0.014	0.080	-0.172	0.015	-0.078
0.033	0.161	0.042	-0.071	0.099	0.035

1.000

0.449	1.000				
0.428	0.375	1.000			
0.323	0.332	0.673	1.000		
0.517	0.399	0.388	0.424	1.000	
0.382	0.184	0.345	0.285	0.372	1.000
0.041	0.115	-0.016	-0.034	0.128	-0.024
0.037	0.120	0.106	0.159	0.084	0.125
0.102	0.155	0.036	0.001	0.132	0.170
-0.059	0.068	0.006	0.003	0.038	0.067
-0.006	0.008	0.126	0.148	0.048	0.081
0.453	0.451	0.321	0.371	0.340	0.164
0.039	0.075	0.039	0.023	0.029	0.095
-0.020	0.105	0.137	0.011	0.028	0.056
0.039	0.239	0.103	0.157	0.142	0.032
-0.007	0.186	0.010	0.035	-0.054	-0.014
0.092	0.134	0.024	0.001	0.024	-0.055
0.153	0.064	0.080	-0.051	0.135	-0.064
0.015	0.173	-0.013	0.001	0.057	0.000
0.286	0.482	0.357	0.417	0.299	0.134

0.081	0.212	-0.042	0.052	0.075	0.018
0.210	0.107	0.081	0.023	0.179	0.127
0.173	0.208	0.168	0.147	0.123	0.190
-0.056	-0.015	0.122	0.085	-0.007	0.107
0.059	0.061	0.037	0.055	0.075	0.076
0.202	0.257	0.242	0.172	0.144	0.172
0.210	0.205	0.059	0.049	0.226	0.162
0.092	0.096	0.096	0.096	0.160	0.079
0.208	-0.037	0.365	0.191	0.225	0.281
0.212	0.178	0.301	0.219	0.319	0.189
0.147	0.100	0.057	0.034	0.133	0.017
0.018	0.053	-0.071	-0.053	0.042	-0.022
0.087	0.037	-0.020	-0.012	-0.007	-0.022

1.000

0.414	1.000				
0.453	0.397	1.000			
0.353	0.262	0.325	1.000		
0.266	0.305	0.230	0.440	1.000	
0.165	0.182	0.039	0.238	0.205	1.000
0.233	0.295	0.288	0.301	0.127	0.312
0.308	0.388	0.387	0.240	0.223	0.169
0.388	0.251	0.419	0.376	0.327	0.264
0.369	0.385	0.291	0.299	0.211	0.222
0.305	0.237	0.282	0.400	0.295	0.285
0.232	0.175	0.291	0.277	0.185	0.112
0.167	0.251	0.195	0.265	0.165	0.169
0.106	0.243	0.044	0.228	0.219	0.738
0.159	0.288	0.158	0.338	0.263	0.323
0.189	0.209	0.280	0.053	0.144	0.122
0.014	0.156	0.062	0.118	-0.008	0.139
0.068	0.114	0.132	0.180	0.143	0.014
0.097	0.148	0.227	0.131	0.064	-0.004
0.147	0.326	0.207	0.024	0.087	0.185
0.161	0.379	0.271	0.180	0.161	0.112
0.164	0.190	0.133	0.205	0.047	-0.037
0.030	0.195	0.062	0.044	0.206	0.106
0.065	0.151	0.198	0.144	0.009	0.177
0.150	0.146	0.153	0.085	-0.009	-0.011
-0.081	-0.017	-0.054	-0.167	-0.067	-0.039
-0.207	-0.077	-0.315	-0.176	-0.088	0.110

1.000

0.375	1.000				
0.302	0.326	1.000			
0.471	0.343	0.323	1.000		
0.552	0.205	0.368	0.395	1.000	
0.227	0.437	0.370	0.182	0.293	1.000
0.577	0.306	0.262	0.428	0.600	0.294
0.245	0.179	0.248	0.237	0.298	0.248
0.337	0.266	0.402	0.296	0.439	0.189
0.134	0.221	0.194	0.140	-0.038	0.131
-0.049	0.194	0.110	0.012	0.068	0.039
0.083	0.146	0.194	0.130	0.034	0.139

0.164	0.271	0.189	0.107	0.140	0.156
0.191	0.313	0.157	0.136	0.062	0.081
0.183	0.284	0.213	0.134	0.149	0.193
0.195	0.180	0.130	0.175	0.158	0.274
0.064	0.157	0.071	-0.096	0.034	0.068
0.138	0.158	0.192	-0.048	0.205	0.077
0.158	0.168	0.230	0.060	0.202	0.129
-0.058	-0.096	-0.057	-0.058	-0.046	-0.113
-0.167	-0.202	-0.191	-0.198	-0.135	-0.244

1.000

0.438	1.000				
0.424	0.357	1.000			
0.012	0.057	0.124	1.000		
0.124	0.194	0.146	0.182	1.000	
-0.080	-0.026	0.000	0.038	0.077	1.000
0.087	-0.073	0.178	0.220	0.201	0.336
0.142	0.162	0.237	0.215	0.226	0.156
0.176	0.157	0.308	0.223	0.235	0.029
0.160	0.092	0.185	0.127	0.172	0.174
-0.010	0.168	0.117	0.212	0.172	0.159
0.143	0.158	0.136	0.077	0.263	0.168
0.165	0.017	0.238	0.210	0.247	0.158
-0.082	0.091	0.075	0.032	0.080	-0.111
-0.080	0.113	-0.132	-0.129	-0.001	-0.205

1.000

0.279	1.000				
0.128	0.426	1.000			
0.165	0.231	0.307	1.000		
0.093	0.150	0.295	0.350	1.000	
0.175	0.162	0.281	0.276	0.333	1.000
0.309	0.325	0.208	0.360	0.130	0.390
-0.065	-0.105	-0.020	-0.076	-0.076	-0.001
-0.230	-0.052	-0.122	-0.124	-0.003	-0.073

1.000

-0.045	1.000	
-0.175	0.614	1.000

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