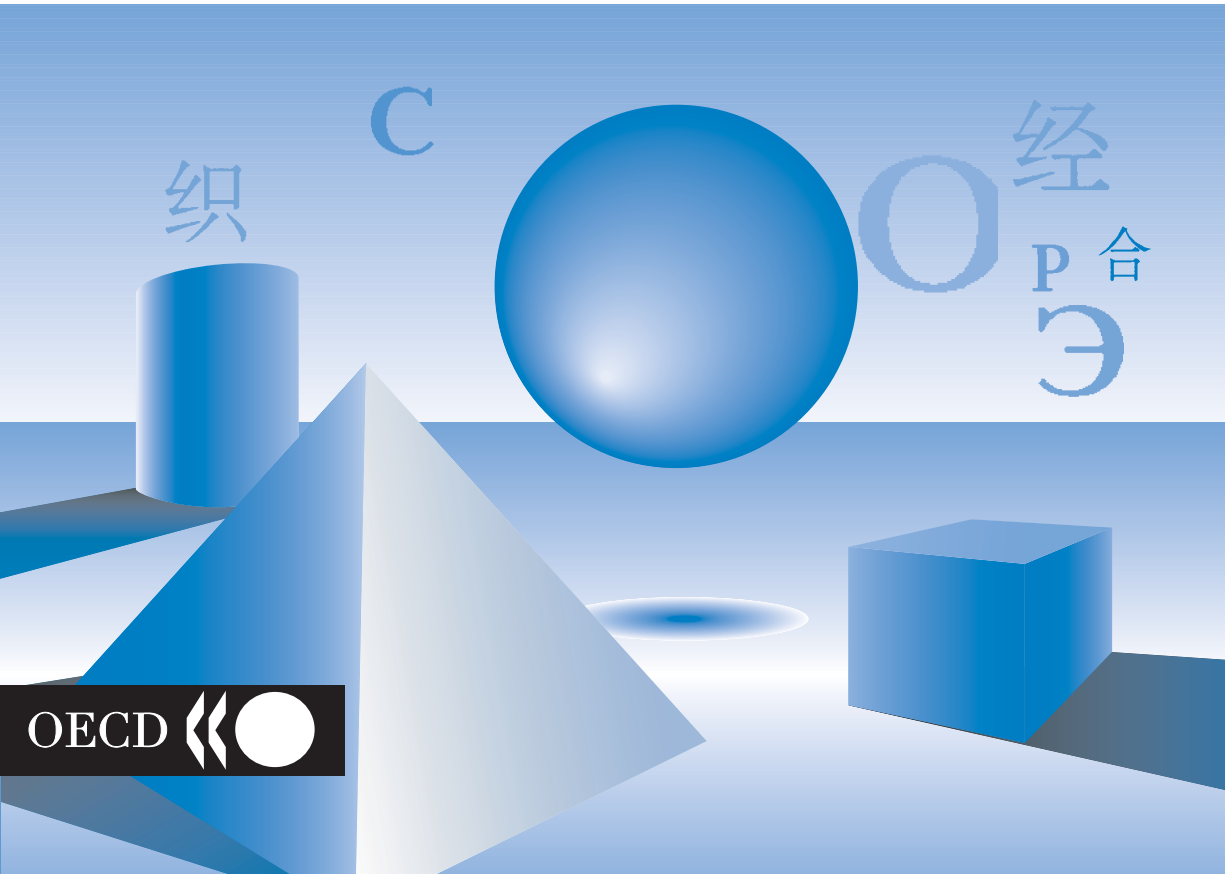
Reviews of National Policies for Education

Denmark

LESSONS FROM PISA 2000



OECD

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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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Foreword

Peer reviews, carried out within the framework of OECD reviews of national policies for education, have been one of the mainstays of the Organisation's comparative analysis of education systems. The publication in 2001 of the first results of the Programme for International Student Assessment (PISA) provided a valuable new tool for complementing such comparative analyses by providing the basis for comparing the outcomes of schooling in OECD countries. In 2003 the OECD Education Committee endorsed an initiative to test on a pilot basis a review of national policies that would combine quantitative analyses permitted by PISA with the qualitative, expert-based approach of national policy reviews.

In 2003 the Danish Ministry of Education agreed that the OECD undertake a pilot review of the quality and equity of schooling outcomes in Denmark. The pilot review was organised within the framework of the OECD education policy reviews, but structured in such a way as to integrate lessons from PISA with an analysis of schooling policy in Denmark for the purpose of recommending policies to improve the quality and equity of schooling outcomes. It was agreed to carry out the review comparing Denmark on overall measures to other OECD countries, and in more detailed comparisons to three reference countries: Canada (the Province of Alberta), Finland and the United Kingdom.

The Review consists of two parts. The Background Report (Part I) reviews the history of the *Folkeskole* and its place in Danish society. It draws on results from PISA 2000 and earlier studies to demonstrate that primary and lower secondary schools are currently falling short of the expectations of Danish society. On the basis of the Background Report the Danish authorities and the OECD developed Terms of Reference that were then used to guide the inquiry of a team of independent examiners that visited Denmark in November 2003. The Examiners' Report (Part II) further analyses PISA results for Denmark and other countries and incorporates detailed information on institutions and policy in three reference countries for insights into what might explain the Danish results on PISA and into possible remedies that build on the strengths of the Danish system and respect the culture, values and traditions of Denmark.

The Background Report (Part I) was prepared by Mats Ekholm, Director General of the National Agency for School Improvement, Sweden, in consultation with the Danish authorities and the OECD.

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The Examiners' Report (Part II) was drafted by Peter Mortimore, rapporteur and chair, and the team of examiners. The other examiners were Maria David-Evans, Deputy Minister for Learning, Alberta, Canada; Reijo Laukkanen, Senior Adviser, National Board of Education, Finland and Jouni Välijärvi, Director, Institute for Educational Research, University of Jyväskylä, Finland. Gregory Wurzburg, Senior Economist in the OECD, designed the pilot review and guided and assisted the team.

A first draft of the Examiners' Report was presented to the Danish authorities in March 2004; the report was finalised in May 2004. The OECD Education Committee discussed the review and policies for improving the quality and equity of schooling outcomes during a Special Session of the committee held in Copenhagen on 9 June 2004.

Sound policy making hinges on understanding the causal relationship between policy interventions and outcomes. The data from PISA 2000 do not allow one to identify the factors that explain the quality and equity of schooling outcomes in Denmark's *Folkeskole.* However they did provide a team of examiners with the evidence they needed to draw reasoned conclusions about the sources of strengths and weaknesses of the *Folkeskole*, and to recommend remedies within the framework of a review of national policies for education. Thus, the pilot approach combining the analyses that PISA data permit with the expert-based methods of the OECD peer review process has proved to be a powerful tool for sharpening policy advice to OECD countries.

Barry McGaw

Director for Education

Examiners' acknowledgements

The team of examiners would like to thank:

- The Danish Minister of Education, Mrs Ulla Tørnæs, for her cooperation and encouragement;
- Everyone who submitted information for our perusal;
- All those who attended our meetings and seminars;
- The school leaders and their colleagues who welcomed us to schools or other places of work;
- The parents and employers who gave up free time to meet with us;
- The mayors and their municipal colleagues who provided valuable contextual information;
- The Director General, Mr Uffe Toudal Pedersen, and his colleagues from the Ministry of Education, National Education Authority who organised our programme so efficiently;
- Mr Joern Oestergaard and Mr Joern Skovsgaard who, so unfailingly, dealt with our many questions and queries both during our visit and after we returned from Denmark;
- Mr Mats Ekholm, Director General of the Swedish National Agency for School Improvement, for his invaluable Background Report;
- Mr Gregory Wurzburg, Senior Economist from the Education Directorate of the OECD, for his general guidance and support.

We are conscious that the Review, like all such exercises, must have been disruptive for many people. Despite this, we experienced courtesy, efficiency and candid discussion wherever we went. For this, we wish to record our grateful thanks.

Mr Peter Mortimore Chair, Rapporteur *Former Director, Institute of Education, University of London*
Mrs Maria David-Evans *Deputy Minister for Learning, Alberta, Canada*
Mr Reijo Laukkanen *Senior Adviser, National Board of Education, Finland*
Mr Jouni Valijarvi *Director, Institute for Education Research, University of Jyvaskyla, Finland*

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Executive Summary

Denmark has one of the most expensive education systems in the world, and for years perceived it to be one of the best in the world. However the disappointing results of recent international tests to measure schooling outcomes confirmed earlier evidence that the system was underperforming (see Chapter 5). The results of PISA 2000 were a catalyst for the Danish Ministry of Education agreeing to an OECD pilot review of the quality and equity of schooling outcomes in Denmark.

An innovative methodology for education policy reviews

This review was organised within the framework of OECD Education Policy Reviews. However, it was carried out using an innovative approach to integrate analysis of PISA data into the expert-based peer review methodology used for traditional reviews in order to identify policy lessons flowing out of PISA. In so doing, the review enhances the explanatory value of the PISA data, while strengthening the statistical framework of the peer review.

The main features of this approach are:

- The Background Report that customarily is prepared by the country under review was replaced by a report prepared by an independent expert. This "diagnostic" report served as the basis for the terms of reference for the review that were negotiated by the Danish authorities and the OECD.

- The team of examiners included experts from three "reference countries" – Canada (the Province of Alberta), Finland, and the United Kingdom – to serve as benchmarks for detailed comparisons with Denmark. The reference countries were "represented" by individuals, each of whom was knowledgeable about PISA results and the institutional arrangements and policy that might explain those results in their respective countries. This allowed the review to take into account variables and information that extend beyond those covered by PISA and other OECD education indicators when comparing Denmark to the reference countries.

The diagnostic report

The Background Report (see Part I) by an independent expert, Mr. Mats Ekholm, was used to develop the Terms of Reference for the review (see Annex 1). The Background Report consists of:

- An overview that discusses the economic and social context of the education system, including the schooling tradition and societal values.
- A description of the education system with particular reference to the *Folkeskole.*
- An analysis of the results of recent international assessments including PISA and the barriers to making policies on quality and equity work.

Its main conclusion is that the strong tradition in Denmark that promotes school independence and puts a premium on trust in schools and professional groups currently limits the availability of information on student, school, and system performance, and hinders its flow between the centre of the schooling system and individual schools, thus impeding the process of education improvement.

The review

The Policy Review, undertaken by the OECD, is an innovative study reviewing the Danish primary and lower secondary school system. The major part of this system (88%) is made up of the public school system – the *Folkeskolen*. This Report, therefore, focuses on this segment of the primary and lower secondary school system. The Review has been undertaken after due consideration of the results on the PISA 2000 international test of 15-year-old students in reading, mathematics and science. The members of the Review Team are education experts, well versed in policy analysis and familiar with education systems. They come from countries deemed similar to Denmark which performed well in the PISA tests (Finland, Canada and the United Kingdom). The Review draws extensively on the Background Report (see Part I) which was written by an education expert from one of the Nordic countries (Sweden).

Although PISA does not allow causality to be determined, the breadth of the available information and the availability of international experts qualified to draw inferences from the data have enabled a thorough investigation of the efficacy of the *Folkeskole* to be undertaken and its outcomes evaluated critically.

The Review Team met on 31 occasions over a 10-day period during November 2003. They visited eight schools and conducted eight seminars and other meetings in eight different locations in Denmark. Information was collected and a range of people – professionals involved with the education system, parents and politicians – were interviewed. They also met students at several schools. The information they gathered has been collated, analysed and debated (electronically) by the Review Team over a two-month period.

Terms of Reference were agreed upon with the Ministry of Education. These directed the Team to judge the strengths and weaknesses of the quality and equity of the outcomes of the *Folkeskolen* before focusing on ways in which any weaknesses could be remedied and the strengths preserved.

The strengths of the *Folkeskole* system which the team identified include: a democratic tradition of decentralisation with scope for innovation; the commitment of the state and municipalities to education – which embraces a sustained investment over a long period, generous staffing and adequate premises and equipment; frequent opportunities for parental choice; dedicated teachers and support staff; confident, happy and well-supported students; a commitment to the integration of bilingual learners; and, finally, a strong desire for improvement.

The weaknesses of the system which were identified include: considerable underachievement; the lack of a strong culture of student evaluation and consequent inadequate feedback; an absence of school self-appraisal and too little sharing of good practice; insufficient attention to early reading problems; failure to counter the effects of home disadvantage; an ambivalent attitude towards school leadership; inadequate pre-service and insufficient in-service teacher training; an over-restrictive teachers' contract; increasing expectations about the scope of teachers' roles; communication difficulties between different kinds of staff; insufficient support for students with moderate special needs; and inadequate support for bilingual students.

The strategy for improvement makes 35 suggestions for changes designed to raise overall performance while promoting equity. These recommendations are addressed to the Minister and her colleagues, the Municipal Authorities and the Local Government Association, the Teachers' Union, the National Association of Parents and the School Leaders' Associations.

The specific recommendations cover the following six broad themes:

- Learning standards, evaluation of student performance and school effectiveness;

- The roles and competences of school leaders;
- Pre- and in-service professional development of teachers;
- The collective agreement regulating the roles and hours of teachers;
- Opportunities for bilingual and special-needs students;
- Other necessary actions.

Recommendations

First theme: Learning standards, evaluation of student performance and school effectiveness

Actions for the Minister in cooperation with relevant stakeholders

1. The Minister, in cooperation with the Association of Municipalities, the Danish Union of Teachers and other relevant stakeholders, initiates a public debate on expectations, policies, practices and outcomes of the primary and lower secondary system.
2. The Minister establishes within the Ministry a municipality education monitoring section.
3. The Minister commissions the Danish Evaluation Institute (EVA) to undertake annual surveys of different-aged students in chosen subjects in order to provide a national snapshot of performance.
4. The Minister commissions a development project to create criterion-based tests in a chosen subject.
5. The Minister initiates an evaluation of different methods and materials concerned with assessment.
6. The Minister, jointly with the municipalities and the Danish Union of Teachers, funds a research project to support the development and dissemination of methods of teacher self-evaluation.
7. The Minister, jointly with the municipalities and the Danish Union of Teachers, establishes a task force to determine expected benchmark standards for different age groups in the main subjects of the curriculum.

8. The Minister establishes a second task force to investigate the efficacy of the different modes of self-study employed within schools and in the school leisure time schemes (SFO).

9. The Minister, jointly with the municipalities and the Danish Union of Teachers, initiates a development project to create a Danish framework for the evaluation of schooling.

Actions for the municipalities

10. Each municipality (or consortium of local authorities) establishes a School Improvement Team to provide immediate support for ailing schools.

Actions for other bodies

11. Copenhagen – as the largest municipality – considers the development of a research and statistics capacity to pilot appropriate data collection and analysis of the concept of "value added".

Second theme: Roles and competences of school leaders

Actions for the municipalities

12. Municipalities make award-bearing leadership and management courses mandatory for applicants for school leadership posts.

13. The period of mentoring continues until the end of the first year of appointment as a school leader.

14. Municipalities (coordinated by the Local Authorities' Association) devise ways to enhance the status of school leaders.

15. Those municipalities which currently do not do so consider the adoption of allowances for posts of responsibility.

Actions for other bodies

16. The School Leaders' Associations undertake joint research to explore the different perceptions of classroom behaviour.

Third theme: Pre- and in-service professional development of teachers

Actions for the Minister

17. Consideration be given by the Minister to the sub-division and possible extension of the current teacher training curriculum into specialist courses.

18. Consideration be given by the Minister to the sub-division of the current teacher training course into age-related components.

19. Consideration be given by the Minister to the optimal way of linking teacher training, in-service work and educational research.

Actions for the municipalities

20. Municipalities (coordinated by the Local Authorities' Association), in association with the Danish Union of Teachers, establish a mandatory programme of targeted annual in-service training for every *Folkeskole* teacher.

Fourth theme: The collective agreement regulating the roles and hours of teachers

Actions for the Local Authorities' Association and the municipalities

21. The Local Authorities' Association and the Danish Union of Teachers ensure that the teachers' contract is made more flexible.

22. Any renegotiated contract includes a substantial component of time dedicated to mandatory in-service training.

23. Municipalities monitor the use of time within the *Folkeskole* so that the opportunities for learning are maximised.

24. The Local Authorities' Association establishes its own task force to consider the optimal way to provide non-academic support for students of the *Folkeskole*.

25. The Local Authorities' Association reviews the perceived barriers between teachers and pedagogues.

26. The Local Authorities' Association reviews the potential opportunities for more flexible use of school space including, where appropriate, more shared usage.

Fifth theme: Opportunities for bilingual and special needs students

Action for the Minister

27. The Minister initiates a research project to investigate the distribution of bilingual students in special education and to make recommendations in light of its findings.

28. The Minister requests a re-examination of the available evidence concerning the use of mother tongue languages by teachers engaged in the teaching of Danish to bilingual students.

Action for other bodies

29. The Local Authorities' Association creates a mechanism to disseminate the methods of those municipalities with acknowledged expertise in the teaching of bilingual students.

30. The Local Authorities' Association reviews the programme of in-service training in order to ensure that sufficient teachers take additional training to equip them to deal with students with moderate special needs.

Sixth theme: Other necessary actions

Action for the Minister

31. The Minister considers whether further legislation is necessary to deal with any of the issues we raise in our Report.

32. Denmark adopts a policy that diagnostic tests and assessments should not be published in the form of simple league tables.

33. Denmark continues to participate in such exercises as PISA in order to maintain an external, international perspective.

Action for other bodies

34. The National Association of School Parents works with chairs of school boards to consider the implications of our recommendations.

35. The Danish Union of Teachers works with chairs of the pedagogical councils to consider the implications of our recommendations.

Part I Background Report

Chapter 1

An Overview

Abstract. Denmark is a comparatively small country with a diversified, highly competitive economy, and a strong welfare state. There is a strong egalitarian tradition. Universal compulsory schooling was introduced in the early 1800s; there is a long history of popular education.

Denmark – a modern state in a global context

Denmark has a population of 5 368 354 (January 2002), distributed over 2.4 million households; annual population growth was about 0.29% between 1991 and 2001 and 0.49% between 2001 and 2002. It is a comparatively small country geographically, covering about 43 000 square kilometres, about three-fifths of which is agricultural. The population density – 124 persons per square kilometre – is slightly above the average of the European Union (EU – 15) and far higher than that of the other Nordic countries.

Denmark's current economic performance is strong. It has the sixth highest per capita GDP in the OECD (USD 29 900 adjusted using purchasing power parities). In the Euro area it is exceeded only by Luxembourg; in the Nordic area it is exceeded only by Norway (data from 2001). Medium-term prospects are good. The most recent OECD economic survey noted that "Denmark is in the enviable position of not facing any immediate macroeconomic problems." The Government has been in surplus since 1997 and the public debt continues to decline. Labour productivity is comparatively high, and unemployment is well below the European and OECD average. It is internationally competitive, and growth tends to be at or above the average for the OECD and above the European average. The most difficult task will be preparing to meet the economic pressures arising from the ageing population. Denmark is better placed than most OECD countries, since public pensions for the elderly are designed to provide a basic level of income support, and most workers will have private occupational pensions available to draw on in their retirement. Nevertheless, the working population is set to decline in just a few years, and the dependency ratio will climb quite steeply. At the same time, there are some public expectations of, and demands for, improvements in the quality of public services, which are often consumed to a significantly greater extent by older people. These two developments risk putting an inevitable squeeze on public finances (see Annex 2 for more detailed comparative statistics).[1]

The Danish welfare state is often referred to as the Danish Model. With the revenue from taxes and duties, the state creates great security for its citizens. A Danish citizen living in this country has a broad spectrum of needs covered free of charge at point of delivery. These include education, medical treatment, hospitalisation, an early retirement pension for those with reduced capacity for work and a national pension large enough to live on. They also include the state subsidies, support for the unemployed, dental costs and nursing home accommodation for those no longer able to manage on their own.

N.F.S Grundtvig (1783-1872) wrote in a song about Denmark that the country has progressed so far that "few have too much and fewer too little". This is precisely the formula for the Danish welfare state. With taxes as a tool, equality of income is achieved so that everyone has the material means for living a reasonable life. The education, health and care offers result in a large public sector and another 29% of taxes and duties levied are paid back to the population as transfer income, such as education grants, cash benefits and various kinds of pensions. The heavy tax load tempts some of the most gifted people to find work abroad and the guaranteed access to social benefits may invite abuse. Despite these criticisms, a large majority of Danes want their welfare state to be maintained.

Gender discrimination in job advertisements is prohibited. Danish women have a labour force participation rate of almost 75% – one of the highest in the world. A comparatively low proportion of that is part-time. The public childcare system enhances opportunities available to women to pursue a career outside the home. Around 90% of all children aged 3-5 are looked after in day-care institutions.

The voting age is 18. For the last 20 years, the participation rate has varied between 82% and 88%. Since 1909, no party has had an absolute majority. That is why the legislation is compromise-led and centre-oriented, which has given Danish politics the title "collaborative democracy".

There have been both single-party and coalition governments. The Prime Minister has most often been a Social Democrat. At the general election in November 2001, the parliamentary majority shifted to centre-right and a new coalition government was formed with Anders Fogh Rasmussen, b. 1953 (Liberal), as Prime Minister. The election campaign preceding the 2001 election was dominated by two main issues: Denmark's future as a welfare state and the influx of immigrants with the associated problems arising from the meeting of Danish tradition and the cultural values, language and religion of the new Danes. Immigrants and their descendants now constitute 7.8% of an otherwise traditionally very homogeneous population. A large number of immigrants are unemployed despite the fact that Denmark has almost attained full employment.

Denmark as a welfare state is threatened by the demographic trend towards a majority of young and old people, with fewer in the middle-aged group, which has to support the rest. Whereas today there are four working age citizens to each citizen who needs support, in a decade or two there will be only three. The election campaign showed broad agreement on attempting to maintain welfare at its current level. In addition, the Government led by Anders Fogh Rasmussen aims to introduce freedom of choice in the social and health services and to achieve greater efficiency,

preferably through some degree of privatisation. Secondly, the voting showed that a majority of Danes want some tightening of the immigration policy. In parallel with the reduction of immigration, Denmark will make a greater effort to integrate those already in the country into the Danish labour market and society.

Since the mid 1960s, industrial exports have exceeded agricultural exports. With an open economy and large dependence on what is happening in the surrounding world, the Danes have benefited from their open and international attitude. A 1 000-year-old farming and fishing country has thus evolved only recently into a fully developed industrial nation, where planes, cars and heavy weapons are among the very few items not produced. The rapid industrial development may seem baffling considering that Denmark's only natural resources worth mentioning are oil and natural gas and these were only discovered in the 1960s.

However, the Danes have managed to extend the natural resources concept. Milk, sugar beets, eggs and meat from the farms were used as natural resources. They became the basis of a production of powdered milk, sugar, cakes, tinned meat, etc. For their processing, machines were needed, so the Danes also started producing – and exporting – these. The export goods needed transportation. This started a shipbuilding industry. The ships needed painting, so a paint and varnish industry developed. The goods needed to be kept cold during transport. This created a refrigeration industry. Seen from the outside, the dramatic industrial growth and constant divergence into new types of production may appear to be random, but in fact there was a strong and logical inner coherence.

International market leaders among Danish companies include firms producing, among other things, cement-making machinery, hearing aids, enzymes for food processing and washing powder, water purification equipment, draught beer fittings, medical measuring instruments, insulin and wind turbines. An export branch that is becoming increasingly visible in the balance of payment is culture, including films, bestselling books and music. Danish companies often sprang from a good idea or an invention, which the inventor begins to produce using his own savings. In this way, industry has become dispersed all over the country, much of it in comparatively small enterprises. If the inventor has found a niche in the world market, a small workshop in the village or provincial town can grow into an international corporation. This has been the development so far for companies such as Danfoss (thermostats), Grundfos (pumps) and Lego (toys).

A long schooling tradition

Denmark had its first School Act introducing compulsory education for all young citizens during the period of absolutism in 1814, prior to the first democratic constitution of 1848. In this period Denmark, due to an economic, ecological, cultural and also psychological crisis, was challenged to make dramatic changes in almost every aspect of life. The production mode was changed from large estates to small family-owned farms, and this was the starting point for a process which eventually changed the nation – government of the state, family life, national identity, literature, art – everything changed at an unbelievable pace. The target of the first School Act was the dominant population in the rural areas but gradually, as industry emerged in cities and smaller towns, new education demands arose. A school organisation developed in the cities – different from the schools in the countryside. As the mid school (*mellemskole*) was introduced in 1903 and expanded in 1937, schooling adapted to the needs of the young people living in cities and to the needs of the more urban society. The *mellemskole* allowed some children to go to elite schools after the fifth year to prepare for more theoretical studies. The dual organisation of basic education based on two different legal frameworks was maintained during the first half of the 20th century, and the differences were eventually eliminated by the School Act of 1958 – creating the first comprehensive system for primary and lower secondary education.

School philosophy in Denmark is impacted to a large extent by Grundtvig. He was the father of voluntary non-formal further education for young people, especially from the country (the so-called folk high schools, the first of which opened in 1844), where the young learned to value and use the spoken word and freedom of thought. Self-aware as they now were, they became able farmers, who also respected their neighbour so that they could join together in groups on a co-operative basis around production, breeding and export with equal voting rights for everyone irrespective of the size of their land or herd. The tone between Danes is relaxed. Almost everyone is addressed by the informal *du*. In the schools, the pupils are on first-name terms with the teachers.

Basic societal values

There is a longstanding tradition in Denmark of striving to reach consensus or at least to reach stable compromises about education policies for the country. Since the German occupation of the country during World War Two, the education system has been seen as one of the most important tools to stimulate and guarantee the existence of a liberal democracy. Within

the Danish state it is important that each individual is respected on his or her own terms. Acceptance of all human beings who are members of the State regardless of their life situation has been a hallmark of Denmark for a long time. Another hallmark has been that each individual has the right to act in the way he or she likes as long as nobody else gets hurt.

This is reflected in the law which regulates the overall aim of the *Folkeskole*. This states that the school, in co-operation with parents, shall provide the students with knowledge, proficiencies, working methods and ways of expression that contribute to the personal development of the individual student. The *Folkeskole* is constructed to include different individuals who will find their personal way through the school years supported by professional teachers.

In Denmark the principle of freedom of the individual, which many countries pay lip service to, has been adhered to. The content of printed matter is really open for any taste and a wide variety of life styles are accepted. In a condensed way, the existence of the small free town Christiania in the middle of Copenhagen, where people live their lives in their own way and where the sale of soft narcotics is tolerated, is an illustration of how far the Danes draw the principle of personal freedom. The authorities have turned a blind eye to the experiment for more than 25 years, although the police occasionally carry out raids in the area. The practice of the principle of freedom of the individual is often combined with an accepting and caring attitude. At the same time the acceptance of rather stretched limits of freedom is seen as a lack of courage and an inability to formulate evident limits for the co-existence between people by the Danish state. The discussion about the practice of democracy in the state of Denmark shows how close the practice of laissez-faire and the use of rules and leadership can be within the borders of democracy.

The rules and regulations often seem to follow the actions of the Danes instead of forcing them to act in ways that are decided on beforehand. For instance the Christmas party season strains enforcement of laws against driving while intoxicated. In addition to using the traditional police controls, the Danes meet the challenge by offering free public transport in the Copenhagen area to make it easier for people to use trains and buses. The Danish state often seems to act towards its citizens as old gardeners do when they lay down a new lawn. They sow grass everywhere; then they wait to see where people walk before they construct the sidewalks.

Danish society is based on mutual trust between its members. The society is a tolerant one where people are expected to act by using their own judgement, not prescriptions or central guidelines. One of the many expressions of these principles is the formulation in the *grundlov* that

guarantees every citizen free basic education in the *Folkeskole*, but where it is also stated that this right to get free education might be fulfilled in a school other than the *Folkeskole* (See Annex 3 for further details on the *Folkeskole*). So school attendance is not compulsory in Denmark, but nine years of education are. As a result, 12% of the children are taught outside the state school system in private independent schools, which may receive up to 70% government subsidy (See Annex 4 for further details on private schools in Denmark). The primary and lower secondary schools are comprehensive, *i.e.* the children are not segregated on the basis of ability or social background. The average percentage of bilingual children, especially children from immigrant families, is 8.6%, but in some boroughs in large cities it can reach one-third. Formerly, pupils wishing to continue in upper secondary school had to be vouched for by the school they were leaving. As of 2001, this is no longer necessary – the pupils decide themselves. Beyond upper secondary school are five universities and a rich variety of tertiary education. Almost all education is free of charge. From the age of 18, young people receiving education may obtain public support, the so-called State Education Grant SU (*Statens Uddannelsesstøtte*), of up to DKK 4 231 per month, so no-one is precluded from going further because of social or economic status. Denmark carries a strong belief in education; and the nation invests more in education as a percentage of GDP than any other country.

NOTES

[1] For further details on macro-economic and structural features of the Danish economy see OECD, 2003a.

Chapter 2

The Education System

Abstract. Local government is responsible for establishing and managing elementary and lower secondary education, with State financial support. Over the years there have been reforms to consolidate smaller municipalities; shift responsibilities between the State, municipalities, parents, and school leaders; and change the administration of education for children with special needs. Judged in comparison to other countries, the outcomes of Denmark's education system have been average on most measures.

Governance

The local community (the *sognekommun*) was responsible for the establishment and management of the local school on the basis of central documents, for instance the law for the *Folkeskole*. In the middle of the previous century the smaller *sognekommuns* had problems establishing and maintaining schools that had sufficiently high quality to serve the needs of the local families. The rural municipalities wanted to have the same high standards in their schools as the cities had. Quality and equity was the focus as the country made several moves to adjust its school system so that the quality could be raised all over the country and equality reached between different subgroups within the system, such as gender groups and groups with different demographic backgrounds.

As a consequence of these ambitions within the education sector and several other strong reasons, in the 1970s Denmark reshaped its structure for local administration. The many *sognekommuns* were merged into larger units which became economically strong enough to support a modern *Folkeskole*. The number of *kommuns*[2] was reduced to 271, all of whom had the responsibility to manage the *Folkeskole* based on a not very detailed group of regulations. The laws about local management of the schools and about the *Folkeskole*, introduced in 1974 and 1977, regulate the way in which the local democracy is adopted to work for the schools of the single *kommun*.

The new laws made the Danish *Folkeskole* system even more decentralised. In the old school system the state employed the teachers, negotiated pay and duties and set rules for the work. The state also formulated the curricular frameworks in terms of the formal content of an Education Plan that the local authorities were obliged to produce. The plan contained the number of hours of teaching in each class, subjects and number of lessons in each subject, attainment targets and the schedule for holidays. The state controlled examinations directly and made inspections through regional advisers. The board of the *kommun* has since decided on school plans and on plans of education in the schools of the *kommun*, which are expected to follow guidelines given in the school law. The school plan is an administrative structuring of the schools of the *kommun*. It contains the names of the schools, the size, definitions of what catchment areas they will serve, and whether one of the schools is used as a central school for a larger catchment area. There is also information about the teacher bodies of the schools. For each school in the *kommun* there should also be a local education plan in which the timetable for all of the classes will be found, as well as the time that is allocated to different subjects and a description of

periods during which there are holidays. In this plan the aims of the education are also described.

Today, schools are owned and driven by the municipalities. This means that all resources in the school are eventually allocated through the *kommun's* account, which is structured according to a national standard. In Denmark taxes are collected by *kommuns*, counties and the state. The state provides a differentiated transfer of resources to the *kommuns* (and the counties) according to the potential tax-revenue in the particular *kommun* (based on the wealth and income of the inhabitants). This transfer is a lump sum, which the *kommun* can reallocate to different tasks according to the local priorities set by the city council. These transfers are negotiated on a regular basis between the Minister of Finance and the association of local government. From time to time the state will indicate that a specific amount of the lump sum was given in order to enable municipalities to take specific initiatives *i.e.* furnish schools with state-of-the-art computers – but this will not jeopardise the choice of the municipalities of a different use of the funds.

Decentralisation in flux

During the 1970s and the 1980s the direct state influence in the *Folkeskole* was decreased. As the responsibility for how much time the teachers used for educating the students transferred from the state to the *kommuns*, the latter were free to find their own solutions regarding the design of teacher work in co-operation with the teacher unions. On a central level the Danish teacher association negotiates with the association of the *kommuns*, but certain parts of decisions about working time and about salaries of teachers are taken on the local level, in the *kommun*. The management of the schools was led by a school leader, who had to discuss important questions and take advice from the teacher council of the school before decisions were taken. From 1989 all of the regulations concerning the management of the schools and about the content of schooling have been brought together into one law, the law of the *Folkeskole*. With this development step, Denmark continues on the road of decentralisation and democratisation of its schools.

The law prescribes local boards of the schools (*bestyrelse*), composed in such a way that the parents of the children of that school have a majority. The Danish state shows in the most evident way that the *Folkeskole* belong to the people who are using the schools. The teacher council has been replaced by an education council which deals with pedagogical questions. The *bestyrelse* has the full trust of the Danish state to advice the school on education matters. In the 1989 Law it is prescribed that the board of the *kommun* shall give each school an economic framework that makes it

possible for the school to act in an independent way regarding money and pedagogy.

In 1992 the state gave up one of the most important control mechanisms of a school system: authority over personnel matters. Since then the *kommuns* have had full responsibility to hire and fire teachers and school leaders. Before 1992 the *kommun* were responsible for the recruitment of its teachers, but had to get advice from the state when a teacher was to be fired. Today the *kommun* has to listen to the *bestyrelse* of the local school before it decides, which in reality means that the local school has a significant power over its staff. The 1990 law also prescribes that parents have the right to choose almost any school for their children and old principles of geographic proximity were left out. The control of the *Folkeskole* is, however, kept by the state by the use of final examinations. These are taken in the ninth year under the control of a group of "censors", or referees, that the state and the *kommun* have decided to use. As a basis for this control, in 1993 the state formulated demands on the *kommuns* that standards of knowledge should have been reached by the students in different subjects in year nine. Danish schools reached a peak as far as decentralisation is concerned in 1992 – since then the state has gradually become more precise in the articulation of expectations as to the outcomes of the schools, which could be seen as a step towards new centralisation. However the state is not "taking back" authority in domains where it earlier gave sovereignty to the *kommuns*. It is more accurate to say that the state has focused new domains for its intervention, namely quality assurance and output-control.

The changes in the power structure are also reflected in the way in which special-needs education is distributed. The state agency for the disabled (*Særforsorgen*) was disbanded by law in 1978 and the responsibilities were gradually turned over to the regional authorities. The process was completed in 1981. As far as special-needs education in the primary and lower secondary education is concerned, the system operates on a distinction between learning disabilities (*kommun* responsibility) and extensive special needs (regional responsibility). The *kommun* will pay a rate fixed by the state to the region for each pupil in extensive programmes. The region decides on the relevant measures to be taken in each case. In 2000, the law changed the distribution of responsibility between *kommuns* and regions. Now *kommuns* decide on the measures to be taken; the rates are increasing substantially.

Recent changes in school policies

During the 1990s the modernisation of the work within the *Folkeskole* was prescribed by the state as it was written into the changes of the

descriptions of the different subjects of the *Folkeskole* that Information Communication Technology (ICT) be used as a tool. In 1996, the state gave the *kommuns* the possibility to arrange better language education for immigrant children from pre-school until the tenth year of the *Folkeskole*. From the early years of the new century the state has become more prominent in its demands on the *kommuns*. In 2002, the government proposed that the state should prescribe final outcomes for the *Folkeskole* that should be reached in the ninth year. The proposal also contains a clarification of what outcomes the state will demand on different lower years of the *Folkeskole*. There are prescriptions from the state on the number of minimum hours of Danish and mathematics during the first three years of the *Folkeskole*. The new policy also recommends that the *kommuns* and schools improve the "in-schooling" of new students, to stimulate the early use of language in preschools, and prescribes the content of the preschool class that is arranged for the six-year-olds in Denmark. English as the first foreign language is prescribed from year three and science, together with history, gets a stronger position in the schools. The government also introduced the idea that there will be some kind of level differentiation in the *Folkeskole* in the future. The notion of the idea of teachers following the same class through the years is reinforced. In fact, few classes have the same teachers all the way through. Teachers are mobile, and some schools even have a policy that teachers should change once or twice during the nine years. However the option of maintaining a prolonged relationship between a class and its teachers is seen as a dynamic tool in the planning and organising of the school year.

Evidence of schooling outcomes

Denmark has now and then participated in international comparisons in education. For instance, in the early 1970s the attitudes of Danish and American youths towards education were compared. The comparison also took into account the relationship between teenagers and their parents. Among other things the study showed that a bigger proportion of the Danish youth and their mothers considered it important to get a higher education (23% and 27% respectively) as compared to their American counterparts (18% and 22% respectively). The comparisons that the researchers were doing in the 1970s between American and Danish teenagers showed that the Americans were concerned with status and power to a much higher degree while the Danes were much more content with individual happiness and self-expression (Kandel and Lesser, 1972).

The Danes expressed a lower level of ambition regarding schoolwork than American teenagers. For instance, 39% of American adolescents

compared to 31% amongst the Danes said that they preferred to learn a lot at school, 54% among the Americans compared to 32% among the Danes said that they saw it as highly important to work hard on studies and 78% among the Americans compared to 38% among the Danes found planning for the future to be highly important. However, other data showed another picture. In both groups, a large proportion amongst the adolescents perceived grades to be very important, but among the Danes there were twice as many (38% compared to 20%) as among the Americans that found it extremely satisfying to work hard on studies. It was more common among the Danes in this study than among Americans to strive for hard work at the same time as one strived for good grades, while the Americans, to a larger degree than the Danes, strived to get good grades but thought to a much lesser degree that they had to work hard to get them.

Although the study was made 30 years ago, it points out some cultural streams that flow in different societies and that are made visible through the comparative study. The researchers that compared the Danish youth with American youth at that time drew the conclusion that Danish youths were more free in their schools to fulfil their strivings in academic areas as well as in most other areas, since their surroundings allowed them to go in their own personal directions, while American youth of that time were locked into more precise social norms that did not allow them to go for academic achievement, but directed them into more narrow modes of social behaviour.

Although Denmark has participated in international comparative studies, the country has not been one of the most eager to participate. When it has participated the quality of the outcomes of the schooling have been mainly solid, though not exceptional. In the Trends in International Mathematics and Science Study (TIMSS) of 1995 (Beaton, *et al.*, 1996), the 13-year-olds scored a little bit below the middle of the average amongst participating countries with their mathematics performance. In the study, which was carried out by the International Association for the Evaluation of Educational Achievement, (IEA) on reading literacy among 14-year-olds in 1991, the young Danes placed well above the international mean of the 31 countries who participated in that study, though the results were less impressive when compared to OECD countries alone. Looking into the results that the Danish schools have produced as measured in the PISA study conducted in 2000, we see that the 15-year olds who participated in this study came out in the middle of the 31 participating countries overall on reading results (16^{th} out of the 27 OECD countries that participated, and 12^{th} on mathematics). Although this might be an acceptable result in many other countries, it is not seen as acceptable in the Danish nation. Denmark belongs to the group of countries in the world who spend most money per capita on education. The expectations on the education system in Denmark are much

higher than the fact that it should belong to the average group in international comparisons. Denmark perceives its education system to be one of the best in the world and the outcomes in recent international studies are far from satisfying.

On the overall measurement of reading literacy in the PISA study Denmark (497 points) scores as close as possible to the average of all of the OECD countries (499 points). The results of the Danish 15-year-olds on the three sub-scales of the reading test are as close to the average of the OECD countries as the overall results. On the two other instruments that were used in PISA, where more limited estimates of the quality of mathematical literacy and scientific literacy were made, Denmark comes out slightly above the average OECD country in mathematics and clearly below the average in science.

A closer look at the Danish results (see Table 2.1) shows that there are minor variations between schools in reading literacy compared with other OECD countries. Only seven countries have smaller variations between schools in reading literacy measured by the percentage of the average variation in student performance in OECD countries. The same goes for the variations between schools for the outcomes of mathematical and scientific literacy. For the outcomes in mathematical literacy, only six countries have smaller variations between schools and for scientific literacy there are only eight countries with smaller variations between schools. Using this observation as an indicator of the way that the country has implemented its policy on equity, Denmark is successful in comparison with most other PISA-participating countries. Compared with its Nordic neighbours Denmark is behind, mainly because of the larger variation between schools reflecting something of a greater tendency to act in a *laissez-faire* way in relation to the socio-economic diversity in society as opposed to the other Nordic countries. In one intense analysis of the PISA data (Rangvid, 2003) the author shows that Denmark may have more to win by finding ways to get more heterogeneous compositions of the students in the schools. In this study, the weaker readers in particular seem to gain from working in groups with larger heterogeneity than now occurs in the Danish *Folkeskole*.

Table 2.1 Between-school and within-school variation in student performance on reading, mathematical and scientific literacy scales in PISA 2000

	Reading Literacy		Mathematical Literacy		Scientific Literacy	
	Between schools	Within schools	Between schools	Within schools	Between schools	Within schools
Denmark	20	86	15	71	19	102
Canada	17	80	14	68	14	72
Finland	11	77	6	69	6	78
United Kingdom	22	82	21	72	25	77

Source: Tables 2.4 and 3.5 in OECD, 2001a.

Denmark has had policies of inclusiveness for some time, aiming to ensure that everyone should be able to find a place side by side with other people and be respected for his or her own person. One area where this policy has been practised is within schools. In Denmark, very few students are excluded from daily life. If this happens, the *kommun* and the parents have intense negotiations and together try to determine whether or not participation in special solutions might be the best for the student. Very few students in Denmark participate in special education programmes that exclude them from ordinary work in the *Folkeskole* (in 2002 a little higher than 1%). The practice of this policy is also indicated in the PISA results in the within-school variation measurements. In scientific literacy, Denmark has the largest variation of all of the studied countries concerning the within-school variation. For the within-school variations in reading literacy, only three countries have a larger variation. For mathematical literacy, there are 14 countries who have a larger variation than Denmark. However, these measures show that the country, in a rather pertinent way, practices its own values – that everyone will be taken care of within the same school. The result in mathematical literacy is, however, a warning signal to Denmark to look for the practice of its own principals in all areas.

The outcomes of the PISA study have been analysed in a highly qualified way for the five Nordic countries in the report *Northern Lights on PISA,* where a group of Nordic researchers present their in-depth research into the findings. In this analysis the equity perspective, which for some time has been one of the cornerstones of the policies of all of the five countries, is highlighted. In Denmark, as well as in the four other Nordic countries, the policy is that all children and youths shall have equal access to education and that the obstacles that individuals may have to conquer to gain

the experience and knowledge that is required will be removed. It was first seen as important to establish equality between young people coming from different regions, then between the gender groups and between different socio-economic groups and most recently between groups with different ethnic backgrounds (Lie, Linnakylä and Roe, 2003).

Denmark has one of the smallest differences between the reading literacy of boys and girls among the 31 participants in the PISA study (Table 2.2). In the Northern Lights study, a comparison is made between the results of the reading literacy study in 1991 and the PISA results in 2000 for the Danes, as the nation participated on both occasions. Although such comparisons must be made cautiously, the researchers of the Northern Lights study (who have used Rasch scale points, which in the actual comparison seem to be both relevant and reliable) show that gender differences in Denmark increased over the last decade. The analysis of the gender difference development, however, shows that the other four Nordic countries have the same development and that Denmark has the smallest change among them. In all of the countries girls score better than boys on reading literacy tests.

Table 2.2 Gender differences in student performance on reading, mathematical and scientific literacy scales in PISA 2000

	Differences in reading literacy between boys and girls	Differences in mathematical literacy between boys and girls	Differences in scientific literacy between boys and girls
Denmark	-25	+15	+12
Canada	-32	+10	-2
Finland	-51	+1	-6
United Kingdom	-26	+8	+4

Source: From Figure 5.1 in OECD, 2001a.

The gender differences show different patterns for the measurements of mathematical and scientific literacy than for reading literacy. Girls do not score as well as boys in mathematical literacy in Denmark and the gender difference in the country is a little bit larger than in the average PISA participating countries. It is especially greater in the tasks which require the feeling for mathematics in real life and the use of mathematics as a kind of language that the girls fall behind the boys in Denmark. Although PISA is a very limited measurement of mathematical literacy, it is possible to do a comparison with the more thorough study that was made in TIMSS in 1995. In this study the 13-year-old Danish students were clearly behind their Swedish counterparts, for example. In the PISA-study the Danish 15-year-

olds seem to have raised their performance and they have taken a tight lead among the Nordic countries (Turmo, Kjaernsli and Petterson, 2003).

The gender differences are in favour of the girls when scientific literacy is measured in four out of five Nordic countries. In Denmark the opposite pattern exists. The boys score significantly better than girls. As Kjaernsli and Molander (2003) point out, that is in line with the findings in TIMSS in 1995, where Denmark, together with Israel, was the country with the largest gender difference in science in favour of the boys. In the PISA study the Danish girls seem to have grasped to a lesser degree the concepts used in science compared with the boys.

The equity policy is directed to a large extent toward the injustice between different socio-economic strata in society. The *Folkeskole* system is constructed to allow everyone to develop as far as possible and the schools are made to support all individuals without considering their home background. Several studies during the years have shown that the Danish school system does not succeed very well in this area. The PISA study underlines this. This is seen as a very serious problem in Denmark and the situation of immigrant children is especially unsatisfactory. The integration of new Danes into the schools and into the society is an important area of concern in the country.

The comparison between the IEA study of 1991 and the PISA study in 2000 is, in the case of Denmark, more than an approximation. As a part of the PISA rotation strategy of measurement of the reading literacy, a booklet that was used in 1991 was reused in 2000. This unique situation shows that Danish teenagers, to some extent, have lowered their reading literacy during the end of the previous century. This finding is a warning sign for the Danish school system, as it indicates that the quality of the system may be falling. In addition, it is a warning signal to the system that the same analysis shows that there are no observable increases in reading literacy between the ages of 14 and 15 in the studied material (Allerup and Mejding, 2003).

The Northern Lights study also illuminates the extent to which Denmark succeeds in realising the policy on quality and equity with regard to socio-economic conditions. Using a total regression model of the relationship between the measurement of home background and reading literacy, the home background turns out to explain a somewhat larger proportion of the variance among the Danish youth than in the average OECD country and in any of the other Nordic countries. This implies that Denmark, to a lesser degree than other countries, succeeds in handling the differences between socio-economic groups. The country does not succeed in its strivings for equity. The three different constructs of the socio-economic status (cultural,

economic and social capital) that PISA contains are used for the analysis together with the outcomes of the reading literacy test (Turmo and Pilegaard, 2003). The weakest of these constructs is the social capital, as it is measured only with three questions that all deal with the relationship between students and their parents and neglects other social networks such as peers, siblings and other groups of people that exist around young people and may be used for solving education problems.

Among the Nordic countries, the analysis shows that cultural capital has a stronger power to predict the outcomes on the reading literacy test for the 15-year-olds in Denmark than in the other four countries. At the same time the cultural capital is equally as good in this country in explaining variations in reading literacy as the average OECD country. Economic capital explains the variation in reading literacy to a smaller degree in all of the Nordic countries compared to the other countries that participated in the PISA-study. Denmark is no exception here. Social capital, measured in the very restricted way as it is in PISA, shows to be a stronger predictor of reading literacy in Denmark and Norway than in the other Nordic countries and than in most other PISA participating countries. The analysis of other correlations that exists between this measurement and reading literacy shows that Danish teenagers perceive their parents to communicate more often with them than parents in other countries do.

In certain areas the PISA study touches upon quality questions within the school. Some of the questions deal with working methods in schools, relating both to the relationships between the students and the teachers as well as among students themselves. As can be seen in Table 2.3, the answers from the Danish students do not differ from the common pattern except for the time it takes to begin work during lessons, where it seems to be more permissible in Danish schools to go easy.

Table 2.3 Student views on classroom behaviour(a)

	Teachers have to wait a long time for students to quieten down	Students do not listen to what teachers say	Students do not start working for a long time after the lesson begins	More than five minutes are spent on doing nothing
Denmark	27	19	22	55
Canada	35	23	29	46
Finland	39	30	21	44
United Kingdom	31	20	23	41
OECD total	29	23	24	35

(a) Percentage of students who agree that this happens in most lessons or every lesson.

Source: Tables W7.10, W7.12, W7.13 and W7.15 in OECD, 2001b.

Answers from students as well as from principals of participating schools are used. Some other questions illuminate the learning strategies of the students, their motivation, their self-esteem and what working method preferences they have. Concerning the relations between students and teachers, Danish principals perceive these relations to hinder learning to one of the smallest degrees in the PISA material. They are also more tolerant towards different kinds of disruptive behaviour among students as a hindrance of learning. To lesser degrees than principals in other Nordic countries and in most PISA participating countries, they consider bullying, lack of respect, skipping classes, disruptions or student absenteeism as causes of problems in their schools.

The Danish students' perception of school life shows that they, to a larger extent than in the average PISA participating country, experience good relations with their teachers and that they receive support from their teachers in their learning efforts on an average level (Table 2.4). There are a larger proportion of students in Denmark than in the average PISA participating country that perceive a pressure to achieve at school. Like in other Nordic countries, the Danish teenagers to a larger extent than the average PISA participating country describe their everyday work at school in terms such as that there are working norms that do not demand silence and immediate concentration, but allow discussions, movement and clarifications. The analysis of the self-declared learning strategies of the students and its relationship to reading literacy shows that Danish students do not deviate from the common pattern among countries. The different strategies that PISA instruments have shown do not explain many of the variations among the students, which imply that other strategies for learning may do so. The students in Denmark show that their self-declared use of memorisation is in the middle of the PISA participating countries, while their use of elaborations and control strategies are below the average country. Interest among the Danish students in cooperation (number 2) as well as in competition (number 6) is among the highest of the 31 PISA participating countries.

Table 2.4 Student views on teacher-student relations in the classroom (a)

	Teachers show interest in each student's learning	Teachers give students opportunities to express opinions	Teachers help students with their learning
Denmark	62	76	67
Canada	69	75	75
Finland	52	72	66
United Kingdom	75	76	79
OECD total	56	65	66

(a) Percentage of students answering that what is described happens in most lessons or every lesson.

Source: Tables W7.1, W7.2 and W7.3 in OECD, 2001b.

The Danish teenagers state, to a lesser degree than the average PISA participating country, that they feel motivated to study in order to reach positions later in life and that they are motivated to go on even when the task feels difficult and they would like to stop. The students' perceptions of their own possibility to control their education and other parts of their lives show that Denmark belongs to the third of the PISA participating countries where the students have the largest feeling of being in control, while the country is about average when it comes to the perception of the students' self-reliance. The self-esteem is measured in relation to achievement in mathematics and reading in PISA. Danish youths belong to the countries with the highest scores in both of these areas, which have to be contrasted with the outcomes of the tests. One explanation of this relatively high esteem of one's own ability to read and calculate may be the friendly feedback system that exists between Danish students and their teachers, also demonstrated elsewhere in the PISA study. The students may receive more positive feedback than is usual in many other countries, which may create the results. The Danish students also place in the absolute top group among countries where self-reliance in school is a common focus, a fact which supports this notion.

NOTES

[2] The Danish word *kommun* will be used instead of the English expression "municipality", mainly to help the reader to remember that the text deals with Danish conditions. A Danish *kommun* is a geographic area in which more than one municipality may exist and where taxes are collected and kept within the *kommun*. The *kommun* has its own local parliament and government that reflects the political preferences of the inhabitants, who express themselves in elections directly to the *kommun*.

Chapter 3

Policies to Achieve Quality and Equity

Abstract. Responsibility has been devolved to municipal and school levels. However because of concern with outcomes, the State has played a progressively stronger role recently in establishing outcome targets; it has also encouraged (but not mandated) more self-evaluation by schools. Pre- and in-service training of teachers is viewed as a critical means for improving education. School leaders also are seen as being critical to school performance; however the implications for choosing and preparing school leaders are not clear.

Policy is of little interest if it is not implemented and sustained in a national system. There are many ways to get policies into place and there are many tools to use for implementing them. The weakest way to implement a policy may be to inform citizens about it. The strongest way may be to use violence or the threat of violence to force people to follow the policy. Between these two extremes there are many combinations of different possible ways for implementing and sustaining policies.

A tradition of self management by *kommuns* and schools

An overall assumption behind the way in which the Danish *Folkeskole* has been governed during the last few decades is that *kommuns* and schools are capable of managing their own business and at large that *kommuns* and schools are to be trusted. As a result of international comparative studies, this basic assumption has been challenged during the last few years and debates about new components of the governing system have been introduced. Some of these elements have been built into new decisions about the *Folkeskole*. During the last few decades Denmark has allowed itself to base the basic education system on self-managing schools. Following the discussion by Caldwell and Spinks (1988) on the qualities that characterise self-managing schools, such schools take their own decisions on:

- What means will be used for teaching and learning;
- What materials will be used;
- What curricula will be used and how central aims will be interpreted as to what goals need to be reached at the end of the school;
- How the teachers, as well as the students, at the school will be allocated and
- The allocation of time and of money to the schools.

Coaxing by the state

The many self-managing schools in Denmark take decisions within the framework defined by guidelines and policies decided on by the *kommun* or by the state. The schools are accountable to their *kommuns* for the manner in which resources are allocated, actions are taken and for what results are attained. At the same time as the country bases its *Folkeskole* on expectations of self-management, the state in 2000 introduced a central agency for evaluation – EVA, the Danish Evaluation Institute. EVA

evaluates all levels of the education system, and also the *Folkeskole* system. The establishment of EVA is a reflection of the ongoing movement to shift the main mentality in the education system from more of an input to an output paradigm. In this movement it is important in the Danish system to get the school system to act in a learning way, where information from evaluations is used for improvement of the practices in the *Folkeskole*.

The main way for the state to steer the work of the *Folkeskole* has been to make decisions and inform the *kommuns*, the schools and the professionals about what decisions were taken. In most cases the Danish state has found it sufficient to follow this routine in managing the *Folkeskole*. A recent example of the use of this strategy was when the Ministry of Education delivered texts on *The Act of the Folkeskole*, *Central Knowledge and Proficiency Areas*, *Aims for the Subject Matters* and *Curricular Guidelines*; the *kommuns* and the schools were assumed to study the texts and take action. The *kommuns* and the schools are allowed to develop according to their prerequisites and at their own tempo, so the different messages from the centre of the society are treated in the way that local conditions allow. In some *kommuns* there might therefore be a slow tempo of change in the direction that the actors on the central scene had planned. In other *kommuns* the tempo might run at a pace that keeps the *kommun* and its schools far ahead of the ideas and the rhetoric of the central actors. One of the texts (*Central Knowledge and Proficiency Areas*) is compulsory. In the text, binding terminal goals for the *Folkeskole* are formulated and since the autumn of 2003, binding attainment targets for different subjects have been sent out. At the same time, the state informs the *kommuns* and the schools about these bindings, compulsory targets for the schoolwork, the trust in the *kommuns*, the schools and the professional actors are preserved. There are no demands on reports back to the state level in the education system about what steps have been taken by the *kommuns* or estimates as to what degree the new guidelines have been implemented in the *kommuns*. The state has not built up any evident system to gather information about the way all of these demands are met by the local actors and to what degree implementation has taken place.

Gaps in the "evaluation culture" of schools

In many other countries where schools are seen as self-managing, the state shows confidence in the many local actors, but builds systems to keep itself informed about the quality of the work at the local level in order to be able to make eventual changes to the policy or the streams of resources which are allocated to the schools. In Scotland, schools describe in what ways they have succeeded or not succeeded in reaching targets set for the

schools. In Sweden the schools and the *kommuns* make a quality review each year and the *kommun* brings its quality review to the state, which receives the reviews and makes analysis of them to get pictures of what new development steps need to be taken. In the Danish *Folkeskole* system *kommuns* and schools are accountable for the effects of the learning that occurs in the schools, but they do not have to show their accountability to sources outside of their own boundaries.

It is not common within the Danish *kommuns* to find well-developed systems for controlling the quality of school work. The teaching that is delivered is mainly seen as a responsibility for the teacher in her or his co–operation with the students and the parents of the class. The collective of teachers and school leaders do not usually participate in any kind of benchmarking of the quality, or in peer reviews, of the education given. Some *kommuns* share evaluation activities between them, so that one school studies the teaching qualities of another school or scrutinises the outcomes of the learning processes which occur at the school in open collaborations, but this seems to be only on rare occasions. Some *kommuns*, like Århus and Gladsaxe, have made efforts to use different means for quality control. However, the example of these *kommuns* does not seem to have led to a new fashion among the *kommuns* within the area of quality control and quality development. There is a good deal of development potential in the Danish school system as the teachers in many parts of the country seem to work on an individual basis. Teacher teams are still not used in any meaningful way so there could be many new ways to use them to evaluate education and to guarantee quality development.

Some information produced in the Danish system is sometimes used for assessments of the quality of the system and for the assessment of the degree to which the policy on equity has been practised. An example of this kind of information is the results that the students receive at the end of year nine of the *Folkeskole*. At the end of June each year the final results that the students receive from the school, together with the results that the student received on the examination tests which are held some weeks before, are sent to the Ministry of Education. The schools do not usually receive any feedback from the Ministry, for example, on how well the schools have succeeded compared to statistics from another year or compared with schools with the same kind of students. Exceptions to this pattern exist. In 2003, for example, the statistical bureau of the Ministry of Education published an analysis of the outcomes of the final testing of the students in Danish and mathematics, where it was demonstrated that the social background of the students explained 17% of the variation of the results in Danish and 15% of the variation in mathematics. These results are released to the whole system and if the *kommuns* want to make themselves visible

they have to study the list of *kommuns* that one of the political parties, *Venstre,* publishes on the web (www.skoler.venstre.nu/Kommunerangliste_r en.5567.0.html). In this listing of the *kommuns*, the average result for ninth graders has been calculated on the basis of weighted data from the different schools, which makes the possibilities for comparisons between *kommuns* somewhat risky.

In Denmark, *kommuns* have to produce school plans in which they declare how they allocate time, teachers and students for each school to reach the aims which were decided upon. These plans are mainly kept in the *kommun* and the state does not usually request them to check if the *kommun* and the schools in the *kommun* really are following the central guidelines. However, cases exist where the state has collected statistics from *kommuns* and where one *kommun*, which was found to allocate fewer lessons than were compulsory according to the law, was actually accused of misconduct. In some other countries, these kinds of documents are used for feedback sessions between the state and the *kommun*, but in Denmark the absence of requests from the state shows the local actors that the state relies heavily on them and respects their ways to find means to reach the goals. In Danish schools, the *kommuns* and also the government experience difficulty in finding out how well one succeeds in reaching the aims of equity. As there is no easily accessible information on the way different groups of students succeed in reaching the aims of the *Folkeskole* and how well different learning environments succeed in meeting different groups of students, the *Folkeskole* seems to work in an unenlightened situation concerning the equity ambitions. The aims are well known in the system, but critical reviews of what efficiency means in different situations are seldom made visible.

As the results of TIMSS and PISA have been published and debated in Denmark, voices have been raised for new feedback systems for the schools where larger emphasis could be placed on learning results and on finding feedback systems for the schools. Warnings have then been raised against getting back to the test-reliance that existed in Denmark during the 1950s and the 1960s and that the country might fall into the test-driven kind of schools that many teachers see in Anglo-Saxon countries. The leading teachers union warns against falling into that trap as it may mean that the Danish *Folkeskole* would distance itself from the main aim of the school – to contribute to the personal development of each individual. Although the debate on the risks of excessive testing and also the risks of making open comparisons between schools in the system is somewhat heated in Denmark, there seems to be a kind of consensus on a need for a cultural shift in the *Folkeskole* from an input culture to a working culture, more dominated by observations of outputs. These observations may be followed by actions of

improvement if needed. Although this seems to be the main line of development, many parts of the input-dominated working culture remain in the debates that are going on about the schools and their ability to produce good results. The government has, for instance, as a result of the international comparative studies among other things, allocated more weekly hours to the subjects of Danish and mathematics to get better results. Teachers argue for more resources to be able to succeed in practicing the ideas of making more evident differentiations of the support to the students that politicians have presented within the ideas of the including *Folkeskole*.

Education of teachers and school leaders

Another way to influence the quality of the *Folkeskole* is to educate teachers and school leaders who work in the schools, as well as arranging in-service training for these professionals. Teachers are educated at 18 colleges of education which are spread out all over the country. The training follows a concurrent model rather than a consecutive model for the entire *Folkeskole*. The teachers are thereby prepared to cover the entire period of compulsory schooling for the students. During their education, the teachers follow a very broad curriculum to be able to act in every stage of the *Folkeskole* and to be able to participate in the many activities that may occur in the *Folkeskole* during the nine compulsory years for the students. All teachers cover the science of education, psychology, general didactics, school and society, religious studies and philosophy, Danish or mathematics, teaching practice and a thesis. There are three further main subjects that the student has to choose from so that at least two of the following three areas are represented: humanities, natural sciences and practical-aesthetic subjects. During their basic education student teachers participate in in-depth studies of two of the subjects that occur in the *Folkeskole*. Danish teacher education accentuates the integration of theory and practice that exists between school subjects and teaching practice. The programme includes teaching practice at a school for a total of 24 weeks, the organisation of which is decided by the individual college of education.

The admission requirement for the teacher training programme is one of the following leaving examinations at upper secondary level: the upper secondary school leaving examination, the higher preparatory examination, the higher commercial examination or the higher technical examination. Due to the fact that there are normally more applicants than available study places, it has been necessary to introduce restricted admission to the teacher training programmes. About 25% of the study places are awarded on the basis of the leaving examination at upper secondary level. As for the other 75%, it is in principle up to the colleges themselves to decide. One-third of

the students are men and two-thirds are women. About 55% of the student teachers complete the programme at the end of the officially stipulated time of study, and in total 75% complete the programme.

In theory, a teacher certificate qualifies the graduate teacher to teach all subjects to all years (first to tenth years), but in fact the teacher is generally considered sufficiently competent to teach the first to tenth years in the four main subjects taken. In practice, the authorities responsible for the appointment of teachers (i.e. the municipalities, including the school board and the head teacher of the individual school) take the final decision with regard to the question of competence. The basic education of teachers for the *Folkeskole* is under discussion for the moment, based on a proposal released during the final part of 2003.

In-service education for teachers has been offered to individuals to help them to keep themselves up to date with new developments in the subjects that composed their basic teacher education. In-service training for teachers has been hosted by state institutions for a couple of decades, and these institutions are well spread over the country. These centres for continuous learning (CVU) offer courses of short or long duration to teachers and they can participate within the limit of their working time. A rough estimate is that less than one-quarter of the teachers of the *Folkeskole* participate in this and other kinds of in-service training each year. As the participation in in-service training is optional, there are teachers who participate often as well as those who very seldom participate. The established pattern for in-service training has led to a certain degree of course-centrism among teachers in Denmark. During the last number of years, more and more interest has been given to in-service training as part of a development plan for the school. Evaluation that has detected improvement areas in the school may lead to specific needs of in-service training activities that may not be best met by the CVUs, but by specially designed in-service training for the whole staff at the school.

At the CVUs there are possibilities to initiate systematic development work and to initiate research activities which involve many schools. Through these activities more of the evaluative and out-put concentrated working culture seems to disseminate throughout the country. Both the Ministry of Education and the Association of *Kommuns* have presented written material to induce schools to evaluate their own efforts to get the students to learn well. The materials have been well read but changes leading to in-built evaluations in schools have not yet been seen at large. Interesting cases of schools with evaluation activities as one component of the work of teachers and school leaders exist, but the overall picture shows that local evaluation of teaching and other school activities is not common. Since 2000, a specific university for education exists in Denmark. An

amalgamation of four different organisations dealing with the science of education created this strong centre for education research in the country. Education processes will be studied from different disciplinary angles such as education psychology, anthropology, sociology and philosophy. Within the new university resources are also allocated for the study of curricula, which in combination with the more evident demands that the state has expressed through the target aims of different years in the *Folkeskole* may lead to more focussed attention on these topics in the future.

In many ways, school leaders play the key role in getting self-managing schools to work well and to adopt the practical policy on quality and equity in the schools. School leaders are selected for their job by the *kommun*. Usually they have good experience as teachers as a basis for their job. The Association of *Kommuns*, the teacher unions and the Ministry of Education arrange courses for school leaders in which different angles of the profession are brought up and the participants prepare to use modern means to cope with budget problems, social conflicts and many other themes. It is becoming increasingly common that leaders experience supervisory responsibilities or group leadership. Some colleges of education now arrange courses leading to diploma degrees in leadership and management in education, which makes it possible for teachers who may wish to become school leaders later to prepare through study. In the recent discussion on quality of education, the government has proposed that certain diploma courses will be arranged for school leaders. The country has not chosen to use compulsory education programmes for new school leaders, as is the case in France, in which the most important education policies appear as important contents of the programme. This background paper is aimed at the illumination of the way in which the policy for the quality of schooling and the policy for equity through the *Folkeskole* is carried out in Denmark. There seem to be good odds for the *Folkeskole* to continue its development in the direction of extended openness about results and about a more clear responsibility allocation. For a long time the education system has relied on a down-up strategy for school development and innovations in schools. The in-service training system for teachers has for many decades been based on this principle. Most obviously, the principle has been used in the reform of the School Act of 1993, where the reform was based upon a large-scale development programme financed by the state but designed and carried out at the local level. The schools are used to monitoring themselves, making critical reviews and finding improvement actions adopted for the local circumstances. The new component that comes into the Danish system may now be that the central level wants to get informed about what is going on in the system so that shortcomings can be avoided. More recent initiatives like *The Folkskole Year 2000* contain a mutual development strategy, since teacher unions and the Association of *Kommuns* are invited as partners

together with the state. The new, more output-friendly mentality faces several difficulties on its way to becoming institutionalised in the Danish setting. These difficulties might be a good starting point for the discussion of the outcomes of the actual OECD review. The difficulties go back to the tension between existing working norms in the *Folkeskole*, which say that schools are to be trusted and that they do a good job, and the outcomes of internal and external studies showing that there are shortcomings both on equity and on the quality of the results of the schooling. To change the working culture, several components may be shaken up. Some of these components could be brought to the fore during the review to give Denmark a consultation as to how the transformation might be orchestrated.

Chapter 4

Conclusions

Abstract. Presently there is a dearth of information on how students and schools perform; ultimately this hinders the process of reform and school improvement. Remedies depend on identifying the strengths and weaknesses of the system, understanding their causes, and clarifying what actions are needed by different actors in order to improve the system.

In this overview, based on document analysis, few incentives have been found which induce schools or the professional groups to make the desirable transformation. At present there seem to be limited ways in which the centre in the system can be kept informed about what goes on in the different parts of the system. To be able to initiate new steps, the centre of the *Folkeskole* system needs to know about the tempo of the change process and about the degree to which different parties follow new guidelines and policies. Maybe there is a need for inventions of new feedback flows in the system. The strong tradition in Denmark that allows independence and shows trust in schools and professional groups that has been described in the paper leads to a situation where it is rare to get feedback on the achievements of schools that would help the system to learn. Discussions might therefore be initiated on how schools could get more systematic feedback from others and, especially, from the centre of the system. Obviously more systematic knowledge needs to be produced to illuminate how the mechanisms for treating children and youths from different social groups in different ways work inside the *Folkeskole*. The differences between the groups are evident when outcomes are measured. Perhaps it would help the system to find out what observations people make in their schools and what courses they employ when they try to explain the phenomenon of the discrimination of different social groups that exists in the country. Denmark intends to intensify its efforts to fulfil its policies on quality and equity in the schools.

Part II Examiners' Report

Chapter 5

Background to the Review: Context and Concerns

Abstract. The Danish Government agreed that the OECD undertake a review of its primary and lower secondary education system in view of evidence that the system was under-performing. Though the system is comparatively expensive, results from PISA and earlier international surveys suggest that outcomes are at or below the levels observed for other OECD countries. The best do poorly compared to the best in other countries; family background has a comparatively strong influence. There was a strong reaction from different parts of society with renewed political support for steps to improve education. There are multiple levers for academic improvement. There have been recent initiatives by the State to specify attainment targets for students at different ages, and to raise standards.

Introduction

The Danish Government agreed that the OECD undertake a review of its primary and lower secondary education system – the *Folkeskolen* – following reflection on what the government considered to be disappointing results revealed by the publication (in 2001) of the first results of the Programme for International Student Assessment (PISA). The PISA programme is designed to assess: *"how well young adults…approaching the end of compulsory schooling are prepared to meet the challenges of today's knowledge society."*(OECD, 2001a, p. 14).

PISA assessed the levels of a large sample of 15-year-olds drawn from 32 of the principal industrialised countries in the world. These young people were assessed in the year 2000 by means of written tasks carried out under independent, supervised conditions. They were assessed in terms of reading literacy, mathematical literacy and scientific literacy with a stress on reading literacy. A second cohort of 15-year-olds was assessed in 2003 with a different stress on mathematical literacy (results will be available in late 2004). Assessment of a third cohort, with a stress on science, is planned for 2006.

Terms of Reference, listed in Annex 1, addressing the following questions, were agreed upon by the Danish Ministry of Education and the OECD.

- What are the strengths and weaknesses of the quality and equity of the outcomes of lower secondary education in Denmark?
- Which are the most important weaknesses requiring urgent attention?
- What appear to be the principal causes of these shortcomings?
- What are the most plausible strategies to overcome them in a manner that is consistent with the culture, values, and traditions of Denmark?
- Which initiatives might be pursued by the State, municipalities and individuals in implementing and facilitating such strategies?

The OECD appointed a team of examiners to undertake the review. In addition to a Senior Economist from its Directorate for Education, the members were a Professor and former Director of the Institute of Education of the University of London, who was to chair the team and act as its rapporteur; a Deputy Minister of Learning from Alberta, Canada; and two

experts from Finland – a Senior Adviser from the National Board of Education and a Professor and Director of the Institute for Education Research from the University of Jyvaskyla.

The Team met on 31 occasions. In addition to five private team meetings we visited eight schools, conducted eight seminars and participated in a further 10 meetings of varying kinds. On each visit and at each meeting, the members of the Team independently recorded their impressions of the events so that it would be possible to check subsequently on the accuracy of the recordings. We sought to gain valid and reliable information by cross examining our witnesses and comparing their comments with any written statements that we had received. The timescale of the exercise did not permit us to undertake systematic observations of teaching or of learning. The intensive 10-day visit fostered a shared understanding of the Danish system amongst the OECD Team. Following the visit, various documents were requested by members of the Team and supplied by the Ministry of Education. Electronic communications greatly aided the completion of our analyses, debate on our findings and the production of our Report.

In framing the Report, we drew on the structure of the Terms of Reference to create four main chapters. Chapter 5 – *Background to the Review: Context and Concerns* – outlines the main elements of the Danish education system and summarises the level of investment made in the *Folkeskole*. The bulk of this chapter is devoted to an analysis of the principal results from the recent international assessments – including PISA – in which Denmark has participated. Our conclusion that the assessments reveal significant underachievement by Denmark's young people, and hence by its *Folkeskole* system, provides much of the impetus for later analyses. It is followed by a brief comment on the impact of, and reactions to, the results of the 2000 assessments. Finally we list what we term "the levers for improvement". These include an overview of the various powers and responsibilities held by the different agents concerned with the *Folkeskole* as well as a comment on some of the initiatives to raise standards that have already been undertaken.

Chapter 6 – *Strengths of the Danish System* – addresses directly one of the Terms of Reference. In this chapter we describe 15 of the features of the system which our Review identified as positive factors in the *Folkeskole* and more widely in the Danish education system. These include the democratic tradition – which we noted in many aspects of schooling – the high level of funding (in comparison with all other OECD countries), which we described in Chapter 5, and the obvious dedication of education staff. We also discuss the positive and wide-ranging role given to parents in the system and the scope that exists for innovative thinking.

Chapter 7 – *Weaknesses of the Danish System* – presents the other side of the coin as stipulated in the Terms of Reference. In it we discuss the 18 weaknesses we consider need the most urgent attention if the underachievement is to be remedied. We also endeavour to identify the principal causes of these weaknesses. Some are attitudinal and stem from the views of society; our conclusion that the *Folkeskole* currently lack a culture of evaluation is discussed in some detail. Other weaknesses concern practical arrangements. These include the details of the teachers' contract, the training of school leaders and teachers and the provision available for bilingual learners and those with moderate special needs.

Chapter 8 – *Strategy for Improvement* – addresses the central question embodied in the Terms of Reference. In this chapter we take each of the weaknesses already identified and suggest ways in which it can be resolved and, where this applies, who needs to take responsibility for such a change. In undertaking this task we draw freely on our own experience working in similar countries. Some of our suggestions – for a change in the scope of the teachers' contract, for prior training for school leaders and for changes in the training of teachers – may be seen as radical. Others – an increase in provision for bilingual learners or more training for students with special needs – may be thought obvious. One of our principal recommendations for monitoring and evaluation procedures to be built into the system follows and builds on work that has already commenced.

Context

The OECD has a long tradition of undertaking education reviews within its member countries. The purpose of such reviews is to describe and evaluate current education policies and practices and to offer a constructive report on how improvements could be made. The last OECD review of the Danish education system, conducted in the early 1990s, focused on youth education and early school leaving (OECD, 1995). A prior review, undertaken in the previous decade, endeavoured to address issues within the entire education system (OECD, 1980).

The policy review of the Danish primary and lower secondary system is an innovative study focusing on the role of the *Folkeskolen*. It draws on a diagnostic Background Report on the quality and equity of education outcomes of the *Folkeskole* (see Part 1), prepared for the OECD by an independent expert.[3] The use of a consultant in the writing of the Background Report marks a change from the customary way in which officials from the Ministry of Education of the host country prepare background reports prior to OECD involvement. The review also differs from previous models in that, in addition to the use of information from

existing international assessments, it has been able to use as its basis detailed data on the performance of Danish students from the first PISA exercise. PISA also provides a solid and robust database with which to compare Danish outcomes with the outcomes of similar students from selected reference countries.

Because the Danish Government was anxious to learn from the experience of "best practice", experts from three countries, which had performed well in the PISA assessments and were similar in critical respects to Denmark, were chosen to make up the review team. The chosen reference countries are: Finland, Canada[4] and the United Kingdom. But, in order to provide a fuller picture, comparisons have also been made with two other Nordic countries – Norway and Sweden. The four experts are senior educationalists knowledgeable about education policy, practice and institutional arrangements, in their own and in other countries. These experts are also familiar with the PISA project and related research and were, therefore, in a position to flesh out the comparisons and to offer authoritative observations on which factors might explain the PISA outcomes. Because of their experience the experts were able to engage in discussion with Danish educators and administrators about the implications of the PISA data and about any possible remedies involving changes in policy or practice. Thus, in comparing Denmark to the reference countries, it was anticipated that the review would take into account a range of information that might extend well beyond that covered by PISA and OECD education indicators.

The background report provides much information about the quality and equity of the Danish basic education system. Additionally, a publication by the Danish Ministry of Education, *Facts and Figures: Education Indicators Denmark – June 2003,* contains a mine of useful information about the system (Danish Ministry of Education, 2003a). A number of other papers dealing with the *Folkeskole*, private schools, the rights of parents and the integration of handicapped pupils in the mainstream school system were also provided for the Review Team by the Ministry of Education. The existence of these various sources of information, together with the detailed PISA results, enabled the Review Team to focus its inquiry on the tasks laid down in its Terms of Reference without having to provide lengthy descriptions and factual details about the system in general. Accordingly, we will provide only the briefest of descriptions in order to provide an appropriate context for our comments and recommendations.

The Danish system

Denmark's commitment to academic discourse and the pursuit of knowledge is illustrated by the existence of one of Europe's earliest universities – Copenhagen – established in 1479. The philosophical basis of the Danish approach to the education of its children owes much to the country's history and to the writings about freedom of choice by N.F.S. Grundtvig (Moller and Watson, 1944). Denmark has chosen the prevailing Nordic model of comprehensive schooling up to the age of 16 (with an optional extra year). In deciding to keep students of varying skills and knowledge within the same institutions until the late teenage years, Denmark followed a different path than one of its neighbouring countries, Germany, which developed a more differentiated system.

The primary and lower secondary phases of schooling are provided within the *Folkeskole*. This entails an optional (though almost universally followed) year of pre-school provision beginning at age six, a nine-year basic school programme and an optional 10th year (currently embraced by 57% of the age group). Sustained by a tradition going back nearly 200 years, the Danish *Folkeskole* endeavours to educate its students to accept their role as autonomous, informed citizens, well-socialised into a common set of values. Such students, it is hoped, will grow into adults ready to participate fully in a democratic society. The Preamble to the *Folkeskole* Act explicitly states:

> The School shall prepare the pupils for participation, joint responsibility, rights and duties in a society based on freedom and democracy. (Danish Ministry of Education, 2003b)

Dialogue is a key aspect of the teacher-student relationship and this fits neatly with the Danish model of democracy. Politicians in Parliament, and citizens in their everyday lives, explore and discuss where they agree and disagree and then continue discussions to reach a consensus. Through a similar process of dialogue with their students, teachers endeavour to discern what students know and understand. This knowledge then allows both parties to plan further learning and assessment tasks.

The modelling of the democratic process in schools is also considered extremely important by the Danish Union of Teachers (DLF). The DLF believes that democracy has to be taught and developed freshly in each generation. The particular features of Danish democracy highlighted by the Union as important in relation to schooling are:

- Everyone is guaranteed basic knowledge;

- Individuals learn how to acquire knowledge;
- Individuals are able to assess statements and information critically;
- Society subscribes to the idea of equal opportunities for all;
- Society respects other people and their opinions (Danish Union of Teachers, undated).

The *Folkeskole*, therefore, can be seen as the foundation block of society as well as of the Danish school system. Though Danish parents (like their counterparts in Finland) are not legally bound to send their children to school in order to obtain their education, very few exercise their right to educate children at home. About 12% of pupils attend private schools which are run independently but are provided with state support "which, in principle, matches the public expenditure in the municipal schools less the school fees paid by the parents" (Danish Ministry of Education, 2003c, p. 2). These private schools are also subject to minimal supervision by the state. (A more detailed discussion of private schools can be found in the next chapter.)

Investment in the *Folkeskole*

The level of resources invested by the State in primary and lower secondary schooling (the *Folkeskole* years) is relatively high. In the year 2000 it was DKK 42 699 billion. This figure had increased from DKK 33 150 billion in 1991, a rise of 29% (Danish Ministry of Education, 2003a). This amounts to 2.8% of the total national Gross Domestic Product (GDP) in 2000, higher than the OECD country average of 2.2%. In absolute terms, Denmark's per student expenditure is the highest of any country at the level of primary education and exceeded only by Austria, Norway and Switzerland at the lower secondary level (OECD, 2003a, p. 186).

Using a slightly different measure which includes post-secondary non-tertiary education, the OECD provides further evidence that the Danish provision is more generous than that of almost all the reference countries (those chosen for comparison with Denmark) though less so than Sweden (OECD, 2002, p. 19).

Table 5.1 Education Expenditure per Student – 2000

Country	Expenditure per primary student	Expenditure per lower secondary student	Expenditure per primary student as a percent of per capita GDP	Expenditure per lower secondary student as a percent of per capita GDP
Denmark	7 572	7 653	26	26
Canada	NK	NK	NK	NK
Finland	4 708	7 496	18	28
Norway	7 404	8 365	20	23
Sweden	6 295	6 285	23	23
United Kingdom	4 415	5 933(1)	17	22(1)
OECD Mean	4 850	5 787	20	23

Note: Annual expenditure on education institutions per student in equivalent US dollars using purchasing power parities (PPPs)

(1) combines lower and upper secondary education

NK= not known

Source: OECD, 2003a, Tables B1.1 and B1.2 p.197, 198.

Table 5.1 illustrates that Denmark invests generously in its school-age students, both in absolute terms and as a proportion of the Gross Domestic Product (GDP). In the primary age group, it exceeds all of the reference countries; Denmark spends 38% above the OECD average and 45% above the United Kingdom level. In the secondary age group, Denmark spends less overall than Norway but still exceeds the OECD average by some 17% and the United Kingdom by 23%. Interestingly, when expenditure is calculated as a proportion of GDP, Norway's proportion drops below that of Denmark whilst Finland's proportion exceeds it. Table 5.2 illustrates the way the Nordic countries have changed their investments in education over a five-year period.

Table 5.2 Changes in Public Expenditure for All Non-Tertiary Education 1995 - 2001

Country	% Change
Denmark	+26
Canada	-1
Finland	+18
Norway	+7
Sweden	+24
United Kingdom	+20

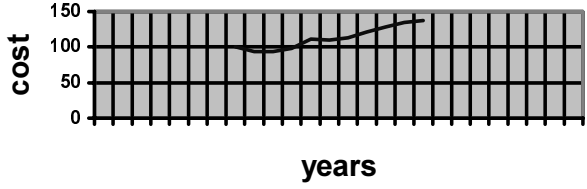
Note: (1995 = 0, 2000 constant prices)

Source: OECD, 2003a, p. 210 Table B2.2.

It can be seen from Table 5.2 that over a five-year period Denmark has invested considerably more than any of the other reference countries with the exception of Sweden.

The OECD also provides information on the cost of primary and lower secondary education over a 20-year period.

Figure 5.1 Real Unit Costs 1980-2000



Source: OECD, 2002, p 21.

As can be seen in Figure 5.1, the cost of provision for the *Folkeskole* age group has increased by nearly 40% since 1980. The Danish State has been highly consistent in its investment in education. The next question that arises, therefore, is whether that investment has produced a satisfactory outcome.

Satisfaction with the *Folkeskole*

We have been informed that public satisfaction with the quality of the *Folkeskole* has traditionally been high. Over the last 30 or so years, a consensus has developed about the kind of schooling that Danes want for their children. According to one OECD study:

> The great strength of the Danish system is its sense of coherence. Virtually everyone – parents, teachers, students, and the general population – seems to share in a broad consensus as to what education is for, and the direction in which it should be going. Parents are accustomed to being involved at every stage of the education process and forms of participation which would be seen as very radical in other countries are taken for granted in Denmark as part of the fabric of normal life. (OECD, 1997, p. 91)

Such a consensus characterises the Danish system in a form that cannot easily be found in other countries. This is not a new feature of the system. The Background Report refers to a study which compared the attitudes of Danish and American pupils during the 1970s and which noted that Danish children had more scope than their American counterparts to "go in their own personal direction*"* (Chapter 2).

But the same OECD study which noted the positive value of a consensus also drew attention to its perils:

> …there is a danger of drift and, perhaps, complacency. Denmark has a generally homogenous and well-educated population and long-established traditions. This gives rise to a public perception that the system works well and can almost be left to run itself... (OECD, 1997, p. 91)

How then can the efficacy of the system be judged? How can parents know if their children are being sufficiently challenged? How can employers know if potential employees are adequately prepared for their future careers? How can young people themselves know if enough is expected of them? There are obvious pitfalls in relying on subjective judgments. Most parents want their children to be happy and, if they are so, may be less likely to complain about the lack of intellectual challenge. Employers, on the other hand, tend (sometimes unfairly) to compare new applicants with existing skilled staff. And young people – with only their peers with whom to compare themselves – are likely to find it impossible to judge whether their generation as a whole is up to the standard of its predecessors. Even more difficult is the judgment of whether existing standards will be adequate for the challenges of the future.

One solution to this dilemma is to use objective evidence from international testing to compare the performance of similar aged students from different countries. Of course such data cannot tell the whole story; all data are partial as tests can only *sample* the performance of students and, furthermore, they usually do so in highly artificial conditions. But, if test data are used intelligently – and with appropriate caveats – they can begin to answer at least some of these important questions.

Results from international tests

IEA literacy test - 1991

In 1991 the International Association for the Evaluation of Educational Achievement (IEA)[5] conducted a large-scale survey of the reading literacy of third and eighth-year students. In this survey, the younger Danish students performed well *below* the international average (500) with a score of 475. The equivalent figures for Finland and Canada were 569 and 500 respectively. However, the scores for the eighth graders were *above* the mean at 525. Those for Finland and Canada were 560 and 522.

In considering the results from the IEA reading test, it must be remembered that, in any test, the "average" will be determined by the nature of the other participating countries; any individual country will appear more proficient if the other samples from the other countries are made up of weak readers, and the converse is also true. Yet the implication of these data for the Danish, rather than the Finnish or Canadian Provincial systems, appears to be that the teaching of reading is not efficacious at its early stages but that, as students grow older, it improves. Caution has to be exercised in drawing inferences about students' development from data collected on two cohorts of students of different ages; longitudinal data on the same cohort would provide a much better base for such a claim. Nevertheless, the Danish results appear reasonable for eighth graders.

IEA TIMMS - 1994/95

Danish students were also included in the Third International Mathematics and Science Study (TIMSS) of eighth-year students conducted in the school year 1994/95 by the IEA. The results show that the Danish average score in mathematics was 502 – just above the international mean – and the average score for science was 478 – considerably below most other European countries. Unfortunately, the Danish survey did not fully meet the sampling requirements of the IEA and, as a result, the results can only be seen as indicative.

OECD PISA 2000

PISA was designed by the OECD, in collaboration with its member countries, in order to create an instrument which could measure how well young adults nearing the end of their basic schooling could cope with the "challenges of today's knowledge societies". (OECD, 2001a, p. 14). The test focuses on tasks that 15-year-olds should be able to master – including the ability to use, and reflect on, knowledge. It endeavours to transcend differences in national curricula. It was first conducted in 2000 on more than 250 000 students within 32 (28 from the OECD) countries using a variety of written tasks undertaken over several hours. Both students and the principals of their schools also completed self-report questionnaires in order to provide appropriate contextual information.

The PISA assessments involved work in three domains: reading literacy, mathematical literacy and scientific literacy. In 2000, the main emphasis was on reading literacy and the treatment of the other two domains was correspondingly lighter. The next phase of PISA testing undertaken in 2003 will be published in December 2004. It will focus predominantly on mathematics with lighter treatment of reading and science. The assessments planned for 2006 will focus predominantly on science. This methodology thus allows one domain to be assessed in depth every nine years but also for standards in each to be gauged at three-year intervals.

The PISA results show that the average score for Danish students in the main measure of reading literacy was 497 points, marginally below the OECD average of 500 (and standard deviation of 100). The performance in relation to a selection of other countries is shown in Table 5.3.

Table 5.3 Mean Performance on Reading Scale

Country	Mean score	Standard Deviation
Denmark	**497**	**98**
Canada	534	95
(Alberta)	550	NK
Finland	546	89
Norway	505	104
Sweden	516	92
United Kingdom	523	100
OECD	500	100

NK = not known

Source: OECD, 2001a, Table 2.3a, p 253.

As may be seen in Table 5.3, the Danish score is considerably lower than that of the others – over 50 points below that of Alberta and 26 points below that of the United Kingdom. It is close to the OECD average whilst the score of each of the other reference countries shown is significantly above it.

The difference between the results of the IEA reading test and the reading section of PISA, less than 10 years apart, has been investigated in detail as part of a special analysis of Nordic countries (Allerup and Mejding, 2003). The authors warn of the difficulties of equating results gained from different tests but point out that, in the case of Denmark, some comparison has been made possible by the inclusion of a selection of items from the earlier IEA test in the later PISA assessments.

Using a mathematical technique developed by a Danish statistician (Georg Rasch), Allerup and Mejding investigated the difference in results between these two tests. They concluded that the better results gained on the IEA test, in comparison to the results of the PISA test, were partially because of the inclusion of less high-scoring countries in the IEA sample, but could also have been due in part to a decline in the skills of Danish students by the time of the PISA testing. Either way, the news for those involved in the education system was not encouraging.

The PISA data also show that 17.9% of the Danish sample scored either below or only at Level 1 on the scale, indicating "that they may have serious difficulties in using reading literacy as an effective tool to advance and extend their knowledge and skills in other areas" (OECD, 2001a, p. 48). The

equivalent figures for the other reference countries are: Canada 9.6%, (Alberta) 8%, Finland 6.9%, Norway 17.5%, Sweden 12.6% and United Kingdom 12.8% (OECD, 2001a, Table 2.1a, p. 246). On this measure, the Danish results are close to those of Norway but considerably worse than those of the other reference countries, thus demonstrating a lack of equity in the outcomes.

In order to examine this question of equity further, performance on the Combined Reading Literacy Scale has been explored in relation to students' gender.

Table 5.4 Performance on Reading Scale by Students' Gender

	Mean Score of Males	Standard Error	Mean Score of Females	Standard Error	Difference (Female Superiority)
Denmark	485	3.0	510	2.9	+25
Canada	519	1.8	551	1.7	+32
(Alberta)	533	4.0	571	3.5	+38
Finland	520	3.0	571	2.8	+51
Norway	486	3.8	529	2.9	+43
Sweden	499	2.6	536	2.5	+37
United Kingdom	512	3.0	537	3.4	+25
OECD	485	0.8	517	0.7	+32

Source: OECD, 2001a, Table 5.1a. p276.

Table 5.4 shows that in Denmark and all reference countries, females outperform males. The biggest gender difference is in the Finnish sample and the smallest is in the Danish and United Kingdom samples (approximately half of the Finnish).

The data have also been examined in relation to the home backgrounds of students in the different countries by looking at the performance scores of the *least advantaged* students, those falling in the lowest quarters of each of the home background factors.

Table 5.5 Performance on Reading Scale by Students' Backgrounds

	Mean Score of Lowest Quarter – Parental Occupation	Mean Score of Lowest Quarter – Family Wealth	Mean Score of Lowest Quarter - Cultural Possessions	Mean Score of Lowest Quarter Classical Culture
Denmark	465	485	466	473
Canada	503	514	508	502
(Alberta)	515	NK	NK	NK
Finland	524	535	516	530
Norway	477	496	464	482
Sweden	485	508	484	498
United Kingdom	481	508	489	494
OECD	463	481	466	477

NK= not known

Source: OECD, 2001a, Tables 6.1a, p283; 6.2, p286; 6.3, p287; 6.4 p288.

Table 5.5 shows that Denmark generally achieves the least equitable outcomes in reading results in comparison to the reference countries. The Danish mean score is the lowest within each of the categories except for "Cultural Possessions", where it is marginally higher than that of Norway. As with the overall results, these Danish scores fell very close to the OECD averages. This suggests that home background factors have a more powerful effect in Denmark than in the reference countries. They contrast markedly with the scores of Finland which were, uniformly, the highest amongst all the reference countries (although outcomes in Finland are still influenced by family backgrounds).

As the Background Report notes, a recent study examining the PISA results of all the Nordic countries stressed that Denmark stood out on a measure of "cultural capital"[6] and that this illustrates that "family" rather than "school" influence is proving a decisive factor in young people's attainment (Pilegaard, Turmo and Turmo, 2003). A further factor might be that in other countries – Finland for instance – it has proved possible to achieve greater homogeneity in the geographical mix of students. A recent Danish PhD thesis, based on PISA data, suggests that within schools the "mixing of abilities is the optimal policy to maximise average reading skills in the student population" (Rangvid, 2003).

Yet another way of examining the question of equity of is to consider the outcomes for those students whose home language was different than the national school language, in other words, the bilingual students.

Table 5.6 Mean Performance on Reading Scale for Native Danish, First-generation Immigrant and Non-Native Students

Country	(A)Mean Score for Native Students	(B) Mean score for First Generation Immigrant Students	(C) Achievement Gap (A-B)	(D) Mean Score for Non-Native Students	(E) Achievement Gap (A-D)
Denmark	504	409	-95	433	-71
Canada	538	539	+1	511	-27
Finland	548	NK	NK	468	-80
Norway	510	464	-46	449	-61
Sweden	523	485	-38	450	-73
United Kingdom	528	510	-18	456	-72
OECD	506	467	-39	446	-60

NK= not known

Source: OECD, 2001a, Table 6.10, p293.

As may be seen from Table 5.6, the mean score of those Danish students who are first-generation immigrants was substantially lower than that of their native peers. In fact, the achievement gap of over 90 points was more than twice the size of the equivalent students in Norway and nearly three times that of comparable students in Sweden and in the OECD as a whole. In relation to the third group of non-native students, Denmark, like all the other countries listed except Canada, achieved much lower scores with this group than with those who were natives.

In relation to Finland, there were insufficient numbers of first-generation immigrants to measure their performance, showing that this issue is as yet untested. Interestingly, in Denmark, this group gained higher scores than the first-generation immigrants, though without specific information about the background and social standing of different groups and knowledge of which home languages were spoken, this result is difficult to interpret. However, the much lower achievement of both non-native groups in Denmark is a cause of concern and can be seen as another illustration of lack of equity in the outcomes.

It is not, however, only the least achieving group that causes concern. Rather it appears that underachievement occurs across the spectrum in Denmark. Not only did relatively disadvantaged children perform disappointingly in the PISA assessments but Danish children from advantaged and so-called "average" families also performed less well than their equivalent peers in other countries. The contrast with Finland is striking.

Table 5.7 Average Scores on Reading Scale by Top and Third Highest Quarters of Index of Family Wealth for Denmark and Finland

Country	Top Quarter	Standard Error	Third Quarter	Standard Error
Denmark	506	3.8	511	3.6
Finland	556	3.8	551	3.2
Difference	Denmark -50		Denmark -40	

Source: OECD, 2001a, Table 6.2, p286.

As can be seen in Table 5.7, both groups of Danish students performed markedly worse than their peers from Finland (50 points and 40 points lower, respectively). Curiously, the Danish students from the third highest quarter (average) performed slightly better than Danish students from the top quarter thus illustrating that underachievement occurred even amongst students from the most "advantaged" homes.

A similar pattern can be found if families are grouped by a different measure of advantage – occupational status. This demonstrates that these figures are not random fluctuations but form part of a systematic pattern.

Table 5.8 Average Scores on Reading Scale by Top and Third Highest Quarters of Index of Occupational Status for Denmark and Finland

Country	Top quarter	Standard Error	Third quarter	Standard Error
Denmark	543	3.6	511	3.2
Finland	576	3.3	555	3.1
Difference	Denmark - 33		Denmark - 44	

Source: OECD, 2001a, Table 6.1a, p283.

Table 5.8 illustrates that both groups of students from Finland outperformed their Danish peers (with the greater difference found in the third, rather than the top, quarter). Yet these two segments of the Danish

sample may have been expected to outperform their counterparts from Finland since, as Table 5.9 shows, a considerably greater proportion of the Danish mothers had themselves experienced tertiary education (a customary predictor of children's achievement).

Table 5.9 Percentage of Students with Mothers Educated at Tertiary Level

Country	Percentage of Students	Standard Error
Denmark	44.5	1.1
Finland	26.8	1.0
Difference	Denmark +17.7	

Source: OECD, 2001a, Table 6.7, p291.

A different way of addressing the question of how successful Danish schools have been in achieving equity is by examining the variation in students' reading results "between" and "within" schools. In fact, as can be seen, Denmark comes midway between Canada and the United Kingdom in the amount of variation (19.6 %) in the average achievement in reading literacy "between" its different *Folkeskole*. As noted in the Background Report this points to some success in achieving the goal of equity. This is probably due to the fact that Denmark has chosen to create a comprehensive system of primary and lower secondary schooling in order to foster equity, unlike some of the other countries within the OECD. In Germany, in contrast, where some *Lander* have chosen selective systems, the equivalent figure is 74.8 %.

In contrast to the low figure for "between schools" – and also probably related to the comprehensive nature of the school system – the figure for "within school" variation in the Danish students' results is comparatively high (85.9). The figures for the reference countries can be seen in Table 5.10.

Table 5.10 "Between-school" and "Within-school" Variation in Student Results in Reading

Country	Total Variation Between Schools	Total Variation Within Schools
Denmark	19.6	85.9
Canada	17.1	80.1
Finland	10.7	76.5
Norway	12.6	102.4
Sweden	8.9	83.0
United Kingdom	22.4	82.3
OECD	36.2	65.1

Source: OECD, 2001a, Table 2.4, p257.

Table 5.10 demonstrates that Denmark has the second highest level of "between school" variation in the student results after the United Kingdom and that this contrasts markedly with the figures for Sweden and Finland (8.9 and 10.7 respectively). The figures for the reference countries fall well short of the OECD average. But each of the reference countries also greatly exceeds the OECD average with their figures for the "within school" variation in student results. Denmark has a high "within school" variation figure (85.9), second only to Norway (102.4), but those of the other countries are similarly high.

It is possible to use some of the other student data, collected by PISA, to calculate what proportion of these two measures can be "statistically explained" by the students' socio-economic family backgrounds. However, we feel it is important that our caveats are made explicit. First, the term "explained" is being used in its statistical sense and does not necessarily imply causality. Second, it is essential to remember that the PISA data are not longitudinal; rather they attempt to capture the achievement of students at a particular stage and time and, since they contain no information about the state of students at entry to the school, cannot be used to indicate progress. Third, the background information is limited solely to self-report questionnaires. Fourth, all the analyses adopted by PISA draw on a *single* rather than a *multilevel* model and cannot take full account, therefore, of the natural groupings in which the students and their data exist.

These points having been made, it is possible to calculate a crude indication of how much the seven background factors (having a single

parent, the number of siblings, whether foreign born, the status linked with parents' work, the number of years parents went to school, the level of education resources, and the indications of cultural possessions available in the home) influence the differences in student results, as shown by the "within" and "between" schools variation.

As can be seen in the next table, such an analysis shows that the percentage of the variability of the "within schools" results that can be explained by student background factors is relatively small (ranging from 14% to 20%) for all the reference countries. In contrast, the variability in the "between schools" results is high, ranging from 18% up to 73%.

Table 5.11 "Between School" and "Within School" Variation in Students' Results in Reading

Explained by Socio-Economic Background Factors

Country	% Between Schools Variation Explained by Background	% Within Schools Variation Explained by Background
Denmark	58	18
Canada	42	14
Finland	18	20
Norway	48	20
Sweden	73	17
United Kingdom	61	18
OECD	34	14

Source: OECD, 2001a, Table 8.3, p310.

As noted, the "within school" variation does not differ greatly (only 6%) between any of the countries shown in Table 5.11. However, in terms of "between school" variation, Sweden's high figure of 73% stands out (though it has to be set alongside the very low figure of the total variation between schools shown in Table 5.10). Nevertheless the figure of 73% contrasts vividly with the 18% attributed to Finland. Denmark and the United Kingdom, whilst not matching the figure for Sweden (and without the extremely low total variation), remain at the high end of the distribution.

More detailed analyses of these data from the Nordic countries have been undertaken by Valijarvi and Malin (2003). They conclude that the social status of the school (determined by the aggregation of the backgrounds of the individual students into a "school characteristic") has a

much more powerful impact in Denmark or Sweden than in Finland or Iceland. They report that as much as 61% of the between school variation in the Swedish results could be explained by the social status of the school, in contrast to only 9% of the Finnish results. Their explanation is that the social status of the school adds "a bonus" which is reflected in the students' scores (Valijarvi and Malin, 2003, p. 128).

Our considered view, based on this statistical analysis, is that in Denmark students' schools are having a comparatively weak effect and family backgrounds are having a *comparatively strong* effect on their results. A variety of factors are likely to be involved in how these influences work: housing and residential patterns; the distribution of immigrant groups without fluent Danish; the amount of choice with regard to schools exercised by parents (contributing to heterogenous or homogeneous groups) and the reputation – good and bad – of individual schools. All these factors are likely to make an impact, and, without a focussed and very sophisticated research study, it is impossible to define possible causal mechanisms. Nevertheless, the reality is that family influence appears significantly more powerful in Denmark than in Finland.

PISA Mathematical Literacy

The performance of Danish students on the mathematical literacy scale was also measured by PISA.

Table 5.12 Mean Performance on Mathematical Literacy Scale

Country	Mean Score	Standard Deviation
Denmark	514	87
Canada	533	85
(Alberta)	547	NK
Finland	536	80
Norway	499	92
Sweden	510	93
United Kingdom	529	92
OECD	500	100

NK= not known

Source: OECD, 2001a, Table 3.1, p259.

As can be seen in Table 5.12 Danish students performed much better in mathematics than they did in the reading tasks. Whilst the mean score was still less than some of the other reference countries, it was better than that of either Norway or Sweden and showed less variability (SD) than the OECD mean. The PISA data also allow examination of gender differences in students' results.

Table 5.13 Performance on Mathematical Literacy Scale by Students' Gender

	Mean Score of Males	Standard Error	Mean Score of Females	Standard Error	Difference (Male Superiority)
Denmark	522	3.1	507	3.0	15
Canada	539	1.8	529	1.6	10
(Alberta)	553	4.6	543	3.7	10
Finland	537	2.8	536	2.6	1
Norway	506	3.8	495	2.9	11
Sweden	514	3.2	507	3.0	7
United Kingdom	534	3.5	526	3.7	8
OECD	506	1.0	495	0.9	11

Source: OECD, 2001a, Table 5.1a. p276.

As can be seen from Table 5.13 males had higher scores in each of the reference countries. The most equitable outcome was obtained by Finland; the least equitable outcome by Denmark.

PISA scientific literacy

The performance of Danish students on the scientific literacy scale was also examined.

Table 5.14 Mean Performance on Scientific Literacy Scale

Country	Mean Score	Standard Deviation
Denmark	481	103
Canada	529	89
(Alberta)	546	NK
Finland	538	86
Norway	500	96
Sweden	512	93
United Kingdom	532	98
OECD	500	100

NK= not known

Source: OECD, 2001a, Table 3.3, p261.

The Danish science results were even less satisfactory than those of the reading assessments. The Danish mean score of 481 was much lower than those of *all* the other reference countries and the spread of scores (SD) was greater than that of the OECD.

As with the mathematics results, gender differences in science results can also be examined.

Table 5.15 Performance on Scientific Literacy Scale by Students' Gender

	Mean Score of Males	Standard Error	Mean Score of Females	Standard Error	Difference (Female Superiority)
Denmark	488	3.9	476	3.5	-12
Canada	529	1.9	531	1.7	2
(Alberta)	545	4.5	549	3.8	4
Finland	534	3.5	541	2.7	7
Norway	499	4.1	505	3.3	6
Sweden	512	3.5	513	2.9	1
United Kingdom	535	3.4	531	4.0	-4
OECD	501	0.9	501	0.8	0

Source: OECD, 2001a, Table 5.1a. p276.

Table 5.15 illustrates the variation in results between the male and female students in each of the reference countries. Alberta tops the performance of both males and females. The country with the second highest male score is the United Kingdom, followed closely by Finland. The country with the second highest female score is Finland. Denmark stands out as having the lowest scores for both males and females and the largest difference between them. In terms of equity, therefore, the results can only be viewed as disappointing.

The preceding discussion has summarised Danish performance in terms of both quality and equity in the PISA assessments. The mathematics result stands out as being better than reading, scientific literacy as being much worse. Additional light may be cast on the position of mathematics in Danish schools when the results of the next phase of PISA are published. In the meantime, whilst raising standards in mathematics may be seen as less of a problem, raising standards in science must surely be judged a major priority for the education system.

Reactions to PISA results

Given the aspirations of such a successful country as Denmark, these results must be deeply disappointing. Particularly disheartening must be the feeling that they have occurred despite heavy investment in the country's education system over a long period. Many of those we spoke to during the Review expressed their distress. Some respondents reported that they had been shocked by the reading results from the IEA study of 1990/91 and, therefore, had been expecting poor results from PISA. It was suggested that either standards had been steadily slipping over the last few years or that Danish schools had failed to keep up with the improving standards of other nations.

The PISA results caused considerable anxiety amongst Danish ministers and the business community. An example of this concern can be observed in a recent report from the Economic Council (The Three Wise Men, 2003)[7]. The Wise Men draw attention to the fact that:

> "[C]omparisons between different OECD countries show that costs per pupil in the Danish primary school are among the highest, while the pupils' performance is only average." They go on to argue that: "This need not be seen as a problem if the primary school passes on valuable skills in a number of other fields…such as personal and social skills…", (Danish Economic Council, 2003).

But they conclude that there is currently no possibility of evaluating whether this is, in fact, the case.

Particularly worrying to the "Wise Men" and others was the PISA finding that almost 6% of the Danish sample was not able to function at the lowest level of proficiency within the survey. The PISA team noted that such readers "may have serious difficulties in using reading literacy as an effective tool to advance and extend their knowledge and skills in other areas," (OECD, 2001a, p. 48).

Furthermore, a larger group of 12% was only able to function at Level 1. This group was deemed to be able to complete "only the least complex reading tasks developed for PISA, such as locating a single piece of information, identifying the main theme of a text or making a simple connection with everyday knowledge," (OECD, 2001a, p. 48).

So the conclusion that we have drawn from this analysis of the PISA results is that the Danish education system is currently failing in important ways. In reaching this conclusion we are agreeing with the view expressed by politicians, educationalists and parents, that the *Folkeskole* system – whatever its other strengths and unlike most of its Nordic neighbours – is not producing young people with skills appropriate for a happy and fulfilled life in a modern world. As one representative of the National Association of School Parents commented, "too much focus on teaching and not enough on learning". This representative also felt that teachers too often failed to differentiate sufficiently between students and, as a result, failed to use the benefit of small classes.

Not all parents, however, were critical of schools. In our visits we met a number who expressed nothing but satisfaction with the current system. Even when comparisons were made with the success of other Nordic countries, and in the face of all the available evidence, one parent insisted – in our view, somewhat complacently – that all was well with the *Folkeskole*. And one respondent – in stark contrast to a number of his colleagues – dismissed out of hand all criticisms of the system, commenting that Danish people "were not interested in what went on outside the country" (especially when it had been highlighted by foreigners!).

These very different reactions illustrate that what most people see as a serious problem, a minority dismiss as unimportant. This means that any actions to remedy the situation will need to be handled with sensitivity. Otherwise, the system may be further damaged by extended arguments which, in turn, could lead to further lowered morale and additional loss of confidence.

Levers for academic improvement

Constitutional framework

Having focussed on the context and concerns of the Danish *Folkeskole* system, in subsequent chapters we will review its respective strengths and weaknesses. We will then make our recommendations on the policies and practices which we consider could remedy the situation. Before undertaking these tasks, and prior to closing this chapter, we will consider the formal powers held by the different partners in the education service.

The constitutional framework for the Danish education system is elaborated in a series of acts introduced by the Parliament between 1899 and 2003. The modern *Folkeskole* – or "basic" school – was founded as a result of the Acts, of 1899 and 1903. The legislation enshrines a system which gives responsibility for the *Folkeskole* to the municipalities:

> The *Folkeskole* is a municipal matter (Danish Ministry of Education, 2003b). …The municipal council shall be responsible for the establishment of pre-school classes and for the education provision in the basic school and the [10th year], including special education [Danish Ministry of Education, 2003b, 20(1)].…The municipal council shall lay down the targets and framework for the activities of the schools. The municipal council shall supervise the activities of the schools. (Danish Ministry of Education, 2003b, 1)

The acts also indicate the legal basis for the responsibility of the Minister of Education to "lay down general rules regarding measures to further good order in the schools" (Danish Ministry of Education, 2003b, 52) or "to request any information that he/she deems necessary for the performance of these tasks from the municipal council and the county council," (Danish Ministry of Education, 2003b, 56).

These acts are also peppered with references to other powers of the Minister to lay down regulations on specific matters. If the Minister's attention is drawn to any unlawful matter within the school he/she can intervene by issuing statements and advice to the municipalities of the private individuals concerned. The Minister also has an obligation to oversee the sector in his/her capacity as minister responsible for the formulation and implementation of the overall policy for the sector. All ministerial powers, however, respect the fact that municipalities are the legal owners of the *Folkeskole*.

Role of municipal authorities

In terms of day-to-day life, therefore, it is the municipal authorities, currently numbering 271, which are responsible for all aspects of the *Folkeskole* system. This includes the planning, establishment and closure of schools, the employment and dismissal of staff and the approval of frameworks regarding:

- Targets and frameworks for the activities of the schools;
- Establishment of new classes;
- Number of lessons to be provided (subject to ministerial guidance on the minimum);
- Provision of special-needs education.

The municipal authorities are also responsible for approving individual school plans for teaching put forward by the school boards. They can, if they so wish, delegate all responsibilities to the school boards, with the exception of the powers in relation to the grant and to employer competency.

Role of school leaders

The role of the school leader (known as the headmaster) is also defined in the act.

> The headmaster … shall be responsible for the administrative and educational management of the school and for the activities of the school vis-à-vis the school board and the municipal council ... The headmaster shall be responsible for the supervision of and distribution of work tasks between the staff of the school, and he/she shall take all concrete decisions regarding the pupils of the school, [Danish Ministry of Education, 2003b, 45 (1.2)].

Other parts of the act deal with the school leader's responsibilities for making recommendations to the school board regarding the curriculum, his or her need to cooperate with the staff, student council and school board (of which he or she is the non-voting secretary) and to ensure that students attend their respective classes. The act does not give much emphasis to the role of an academic leader other than a general direction to "ensure that the class teacher and other teachers … plan and organise the teaching in such a way that it offers challenges to all pupils," [Danish Ministry of Education, 2003b, 18 (2)].

Role of parents

For more than 30 years, various acts have enabled parents to be involved in the organisation of various forms of school boards. The legislative changes that took place in 1990 changed the name of the school board from *Skolenaevn* to that of *Skolebestyrelse* and greatly increased its powers and those of the school leader. School boards have the majority of members – and its chairperson – drawn from the ranks of the parents of its students. A further change in 1997 makes it obligatory for the school board to provide parents with an annual report.

Parents collectively play a major role in the system. The act highlights their crucial role in its formal description of the aims of the *Folkeskole*:

> "The *Folkeskole* shall – in collaboration with the parents – further the pupil's acquisition of knowledge, skills, working methods and ways of expressing themselves and thus contribute to the all-round personal development of the individual pupil," [Danish Ministry of Education, 2003b, 1 (1])]. And again: "Pupils and parents shall cooperate with the school with a view to meeting the aims of the Folkeskole," [Danish Ministry of Education, 2003b, 40 (3)].

Individual parents have a well-defined set of rights over their choice of school and the formal progress of their child within it (these will be discussed in a later chapter).

Role of school boards

The boards are responsible for deciding the principles which the school leader has to follow in the administration of the school with regard to the following:

- Organisation of teaching;
- Number of lessons at each class level;
- Level and kind of co-operation and contact between home and school;
- Division of work among the teachers;
- Provision of extra curricular activities.

Each school board approves the school budget within the framework decided by the municipal authority and selects the teaching materials to be used at the school. Thus each *Folkeskole* possesses freedom to pursue its

own policies within a framework, defined by Parliament, which delegates specific powers and responsibilities to the state (through the Minister of Education), the municipalities and the individual school boards.

Role of counties

The legislation also specifies the role of the counties with their responsibilities for upper secondary provision and some aspects of special education.

Recent changes

Over the last 10 to 15 years the government has made a number of important changes to the system. Some of these changes have furthered decentralisation. One such example is the transfer of the full responsibility for the teachers to the municipalities. Other modifications have created new powers for the government. Examples include formulating national attainment targets and final targets. Our impression is of a system in transition between an old emphasis on "inputs" (such as resourcing and the number of hours worked by teachers) and a new focus on "outcomes" (such as test results and the leaving examinations).

The Education Act of 1993 (with its subsequent amendments) introduced the concept of "central knowledge and proficiency areas". Certain topics were defined as obligatory by the minister and special subject handbooks were published centrally, although approval of the curriculum proposed by school boards remains the responsibility of the municipality.

In 2001 the definitions of "central knowledge" and "proficiency areas" were tightened up and made more precise so that they would be clearly seen as "end goals" for the teaching in each subject.

A further act in 2002 dealt with "openness and transparency" of information. It requires that the results of schools' average grades in the leaving examination taken by ninth-year students must be published on each school's home page and linked to the ministry's web site. The reasons given for this change were to:

- Provide schools with the possibility of learning from each others' experience;
- Initiate inter-school dialogue;
- Strengthen teachers' knowledge about "quality";

- Encourage competition between schools;
- Provide citizens with the information to choose between particular schools.

The 2003 Act created an "outcome-based" curriculum framework by enabling competences needing to be achieved by students by different levels (attainment targets) to be specified. (For examples, Danish attainment targets occur after years 2, 4, 6 and 9 and mathematics attainment targets after years 3, 6 and 9.). A key feature of the Danish *Folkeskole* that remains in force is that teachers enjoy the freedom to select both their methods and their teaching materials.

The publication of test and examination results is seen as highly contentious in many countries. Governments hope that parents will study the web site and bring pressure to bear on any schools with poor records of results. The problem with this strategy is that parents reading the information will not be aware of any differences in the quality of the student intake to different schools nor of how easy or difficult it has been for the school to reach a particular standard. Nevertheless, one of the consequences of this initiative is that more information about schools' performance is now in the public domain and is likely to stimulate debate about schools, as well as encouraging similar kinds of teaching to occur throughout the country.

The work of teachers in the *Folkeskole*, therefore, is now subject to *national* aims, *national* final objectives, *national* threshold objectives and – for those students who choose them – *national* formal examination results. In order to inform the work of the teachers, the ministry is producing 25 educational booklets as well as a website for all subjects and topics. In addition, teachers also have to work to *local* curricula and *local* accountability on students' progression.

The local curricula and the local accountability on students' progression must be in accordance with the national aims, objectives and attainment targets. In order to inspire the local level the central authorities have developed suggestions for these texts to be used locally. In other words, the municipal council can adopt centrally made suggestions for the local curricula and local processes of accountability on students' progression.

The 2003 Amendments to the School Act – supported by politicians in the Liberal, Conservative Social Democratic and Danish Peoples' Parties – reflect a renewed concern on the part of the Parliament and the ministry to improve standards in Danish education. This ambition has been reinforced by the disappointment felt over the PISA results.

Initiatives to raise standards

At the same time as promoting new legislation, governments have also initiated a number of programmes and initiatives designed to raise standards. In 1987, the then-Minister of Education established a "Perspectives Committee" with the task of carrying out a survey of the basic knowledge and general values which the school should give Danish young people in order to prepare them for life in the 21st century. This committee of five personally appointed members from trade and industry, education and culture, submitted its report in the spring of 1988. This consisted of a comprehensive catalogue of "basic knowledge" which the school was to convey to its students (Eurydice Database, 2003).

Also in 1987, the Parliament passed a decision to engage the primary and lower secondary school in development work in order to prepare for a new legislation. Over four years DKK 400 million was spent on developing initiatives within seven specified areas. The results were collated and presented to the Parliament by a committee made up of stakeholders. The experience fed into legislation and is now embedded in the 1993 Act.

In 1997 a special programme entitled *National Development of Competence* was launched with the aim of making the Danish system one of the 10 best in the world and one in which individuals "can develop personally acquired competence of high value" (Danish Ministry of Education, 1997a). And in the same year a task force with joint membership from several ministries produced a report entitled *Quality in the Education System* (Danish Ministry of Education, 1997b).

A project undertaken in collaboration with the National Association of Local Authorities and the Danish Union of Teachers entitled *The Folkeskole in the Year 2000* was launched in 1998. This project was established to further the work of the *Folkeskole*. Working in eight areas, it endeavoured to clarify the expectations, estimate the necessary costs and create a number of related ongoing initiatives concerned with targets and evaluations.

In 1999 the EVA was established with the goal to carry out systematic and mandatory evaluations of teaching and learning at all levels of the education system (Danish Evaluation Institute, 2004). This body is now well established and has developed methodologies to suit the nature of its mission. It has since carried out pilot evaluations of two school districts in order to develop and test assessment methods for the *Folkeskole*, including school self-assessment. EVA has also looked at the school leaving examinations, the experience of the first three years of schooling, the international dimension in education and English in the *Folkeskole*. It has just completed an evaluation of teacher training.

Conclusion

Over the last 20 or so years the *Folkeskole* has undergone many changes; its governing act has been frequently amended, powers have been substantially redistributed, the employment of teachers has been altered and many initiatives to improve the quality of education (often with the involvement of stakeholders), have been undertaken. There was thus already a level of official concern about the performance of schools and a determination to do something about the problem. When the OECD proposed carrying out a review to explore the policy implications of PISA, the Danish Ministry of Education agreed in April 2003 that such a review be carried out on the primary and lower secondary school in Denmark. The next chapter will focus on the strengths of the *Folkeskole*.

NOTES

[3] Mats Ekholm, Director General, National Agency for School Improvement, Sweden.

[4] The Review draws on data for Canada as well as the Province of Alberta; as there is no national system of education for Canada, examples of policy, practice and institutional arrangements are drawn from those of Alberta. The additional PISA results for Alberta are from Human Resources Development Canada/ Statistics Canada (2001).

[5] Elley, W.B. (ed.), 1994 The IEA is an independent, international cooperative of national research institutions and governmental research agencies. Its primary purpose is to conduct large-scale comparative studies of educational achievement, with the aim of gaining a more in-depth understanding of the effects of policies and practices within and across systems of education. Since its inception in 1958, the IEA has conducted about 20 research studies of cross-national achievement. The regular cycle of studies encompasses learning in basic school subjects. Examples are the Trends in Mathematics and Science Studies (TIMSS), the International Mathematics and Science Study, and the Progress in International Reading Literacy Studies (PIRLS). IEA projects also include studies of particular interest to IEA members, such as the TIMSS-R Video Study of Classroom Practices, Civic Education, Information Technology in Education, and Preprimary Education. (IEA Secretariat, Herengracht 487,1017 BT Amsterdam, The Netherlands).

[6] This term, drawn from the work of Pierre Bourdieu, a French sociologist, encapsulates parental education, socio-economic standing, home cultural activity and possessions, (including educational resources such as books).

[7] This council was established in 1962 with the aim of monitoring the Danish economy, analyzing the long-term economic development and the interaction of the economy and the environment and improving coordination between the different economic interests in the Danish society. It has 29 members representing unions, employers' federations, the Central Bank and the government. The chairmanship, which is appointed by the minister, consists of three independent economic experts, usually university professors. The chairmanship is customarily called the "Wise Men", www.dors.dk/english/index.htm.

Chapter 6

Strengths of the Lower Secondary System

Abstract. The Examiners found that the Danish education system has many strong features, and performs well in many respects. Strengths of the lower secondary system include a strong commitment to education, solid investment, local control, parental choice, an active role for parents, dedicated staff, strong support for students and a desire for improvement and development. These strengths should provide a base on which improvements can be built.

Introduction

The Review Team was impressed with many aspects of life in Denmark. We found all those whom we met were interested in our task. Danish educators were helpful and many went out of their way to provide us with information to aid us in our work. We saw at first hand much evidence of the richness of education at primary and lower secondary levels in the *Folkeskole*. We were particularly impressed with the following 15 features of the system.

Traditions of democracy

Denmark is a country with a long tradition of democratic government. It was unified in the 10th century and, following a period of absolutism, has been a constitutional monarchy since 1849 when suffrage was introduced for many males. Women (and servants) received the right to vote in 1915. The Constitution was revised in 1953 when one of the chambers, the *Landsting,* was abolished and a single legislative chamber, the *Folketing,* was established. The current Queen, Margrethe II, came to the throne in 1972. Denmark joined the European Union in 1973, but rejected membership of the Euro zone in 2000. The last general election was held in 2001. Currently, eight political parties are represented amongst the 179 seats in Parliament (together with seats dedicated to representation from Greenland and the Faeroe Islands).

The system of proportional representation means that governments are composed of coalitions made up of a number of political parties. In fact, no single party has ever secured an overall majority and, as a result, policies have to emerge as a result of consensus and conciliation. The two largest parties currently in Parliament are the Liberals (56 seats) and the Social Democrats (52 seats). The current government is made up of a coalition of the Conservative Party and the Liberal Party with support from the Danish People's Party and the Christian Democrats.

Democracy plays a role both in the form and content of schooling. According to the Ministry of Education:

> The pupils are taking part in the decision-making process through their participation in a number of decision-making fora at school. As far as the actual teaching is concerned, it is the teacher who is responsible for the establishment of targets for the learning and for the choice of working methods and subject matter in co-operation with the pupils. And the education for active participation in

democracy starts by involving the pupils during their time at school and making them responsible for the decisions taken. Only by doing so is it possible to ensure the credibility of the education in democracy (Danish Ministry of Education Website, undated).

Commitment to education

Denmark has committed itself to an education system designed to maximise the development of individuals through whatever is deemed the most effective means. Thus, whilst the nine-year education process is obligatory, there is no compulsory schooling; children can be educated at home or in any part of the diverse private, but financially supported, provision. The education system has been characterised in an earlier OECD report as "…generous, inclusive, complex, expensive and relatively leisurely in pace" *(*OECD, 1995, p. 94).

Several amendments have been passed by the Parliament since the last *Folkeskole* Act became law in 1993. The latest major change was passed by Parliament in April 2003. The act lays out the academic, social and societal aims for this phase of schooling:

- "… further the pupils' acquisition of knowledge, skills, working methods and ways of expressing themselves and thus contribute to the all-round personal development of the individual pupil."

- "... endeavour to create such opportunities for experience, industry and absorption that the pupils develop awareness, imagination and an urge to learn, so that they acquire confidence in their own possibilities and a background for forming independent judgements and for taking personal action."

- "… make the pupils familiar with Danish culture and contribute to their understanding of other cultures and of man's interaction with nature."

- "… the school shall prepare the pupils for active participation, joint responsibility, conduct of rights and duties in a society based on freedom and democracy."

- "… the teaching of the school and its daily life as such must therefore build on intellectual freedom, equality and democracy." (Danish Ministry of Education, 1995, Chapter 1)

A project undertaken collaboratively by the Ministry of Education with the National Association of Local Authorities and the Danish Teachers' Union entitled *The Folkeskole in the Year 2000* summarised the need for improvement:

> The globalization and the transition to a knowledge and learning society will have an influence on the qualification requirements of the future and intensify the need for life-long learning. At the same time, it will intensify the demands on the Folkeskole as a community - and equality enhancing factor.
>
> Publications arising from the project stated:
>
> The Ministry of Education, the National Association of Local Authorities, and the Danish Union of Teachers have individually and together taken a number of initiatives to support the work carried out by the individual municipality and the individual school with the overall aims of the Folkeskole. (Danish Ministry of Education, National Association of Local Authorities and Danish Union of Teachers, 1998)

The OECD Team was impressed with these aspirations for democracy and with the collaborations that led to them. Whilst, as we will show later, it is our view that Denmark has to overcome a number of problems – such as shifting from worthy aspirations to achieving results – if the performance of its students is to improve substantially, we believe the country has laid a solid foundation from which excellence can grow.

Investment effort in education

Denmark, like the other Nordic countries, invests high levels of resources in its education system, as we illustrated with the comparative figures shown in the last chapter. The Nordic countries differ, however, in how the money is used, as Table 6.1 illustrates.

Table 6.1 Expenditure by Staff and Other Costs for Primary, Secondary and Post-Secondary Non-Tertiary Education

Country	% Staff Costs	% Other Costs
Denmark	78.4	21.6
Canada	76.4	23.6
Finland	68.4	31.6
Norway	81.7	18.3
Sweden	61.6	38.4
United Kingdom	73.6	26.4
OECD	80.3	19.7

NK= not known

Source: OECD, 2003a, Table B6.3 p.247.

In terms of the split between staff salaries and other costs, Denmark devotes less than both Norway and the OECD average but more than Finland and Sweden, both of which have about one-third of the available resources for non-staffing costs and correspondingly greater flexibility in their budgeting. OECD data also indicate that Denmark spends 52% of its current expenditure on teachers' salaries in comparison to 56% in Finland and 53% in the United Kingdom (OECD, 2003a, Table B6.3, p. 247). The high non-teaching costs in Denmark are probably due to the amount of school-leisure time schemes that are available.

It could be argued that Denmark's commitment to staff costs limits its ability to fund other activities but we prefer to see this as an acceptance that people matter and that teachers and pedagogues are the most important factors in the education service.

The country's longstanding investment in education is impressive. A political consensus that education matters, and is thus worthy of public investment, has ensured that all recent Danish governments have maintained this commitment. However, as we and a number of commentators have stressed, it is important that commensurate value for this level of expenditure is achieved. The evidence from the analysis of PISA results suggests that this is not the case.

There will be some critics who will see this evidence as an opportunity to reduce the amount of investment in education. In the view of the Team this would be a very short-sighted action to take given the world interest in educational improvement. In our discussions with politicians and practitioners we did not detect a loss of support for education itself; what we detected was a loss of *uncritical* support. The way to deal with this discrepancy – in our view – is not to reduce the level of funding, but to find

ways to enhance the value it achieves. This is what the measures we will recommend in the next chapter will endeavour to achieve.

Local control

A democratic approach to the oversight of schools distributes both powers and responsibilities across different levels of government (271 municipalities and 13 counties not including Bornholm region, Frederiksberg Municipality and Copenhagen City, which have the dual responsibility as municipality and county) as well as to the schools themselves. This means that the distribution of powers and responsibilities within the Danish system can sometimes appear complex, and that roles and accountabilities may not always be clear to those new to the system.

The Danish Ministry of Education, under the Minister of Education, holds responsibility for the overall system but, because of its decentralised nature, has few formal powers over its daily functioning (as indicated in the last chapter). It sets policy frameworks and can require the other partners in governance to work within these but, in comparison with the equivalent ministries in some of the reference countries, its powers appear deliberately weak and non-interventionist. But this can also be a strength in a decentralised system which depends on collaboration between the various parties, each of which holds specific roles and responsibilities. The benefits are that there is local ownership of the schools by the communities and that important decisions are taken by elected officials close to the issues.

The 271 municipalities are responsible for the establishment of pre-school classes and for the educational provision in the basic school and [10th year] including special education and other special educational assistance for all children and young people under 18 who live in the municipality and whose parents wish them to be enrolled in the *Folkeskole*. They also hold responsibility for the special educational assistance to children who have not yet started school. (Danish Ministry of Education, 1995)

The school boards are made up of a majority of parents (elected for a period of four years) together with teachers, students (all elected for one year) and, where decided, a non-voting member of the municipal council. The chairperson has to be a parent and the school leader acts as the secretary to the board. The municipality has the power to pay per diem allowances and compensation for lost earnings to parents.

Within the municipal guidelines the school boards are responsible for laying down the principles for the activities of the school. They approve the budget and oversee the organisation of teaching, co-operation between the

school and the home, the distribution of work between the teachers, the provision of teaching materials and the school rules.

Recommendations to the municipal council regarding the appointments of the school leader and the teachers are also submitted by the school boards. In practice, the boards exercise control over the employment of staff. They also draw up a proposal for the curricula of the school and for any innovative work which falls outside the target and framework laid down by the municipality.

Pedagogical councils consisting of all staff performing teaching and pedagogic tasks are required to be established at all schools. The pedagogical council can only offer advice but, in day-to-day practise at the school, the school leader is often seen as being dependent on the maintenance of good relations with the teachers, the council and the school's teachers' union representatives.

The school leader and the teaching staff are thus independent and yet accountable to the school board, the municipality and the ministry, each of which possesses formally determined legal powers.

The 13 counties (and one region plus the Copenhagen and Frederiksberg Municipalities) exercise economic control of the upper secondary schools, gymnasiums and schools for Higher Preparatory Examination Courses (HF courses) but have no responsibility for quality control or evaluation of the teaching. They also maintain responsibility for adult education centres, special education for the severely disabled as well as some special services such as the Pedagogical-Psychological Counselling Service.

We can see benefits in this decentralised approach. We understand the value of involving so many authorities in the leadership and management of schools. We respect the confidence the Danish state places in parents. We have been particularly impressed by the way politicians at all levels of government have found ways of working productively across party lines. In a later chapter, however, we discuss some of the possible disadvantages of such a decentralised system.

Availability of choices

Parents exert a number of choices over the education of their children. At present, parents can choose a school outside their district if the municipality permits this as an option. Furthermore, acceptance will depend on the availability of a place in the appropriate class. This situation is, however, currently under review and the possibility of an extension of choice may be included in future legislation.

If they so wish, parents can select private provision. In 1991, the Danish Parliament approved a Private School Act which introduced a new public grant system for private schools. This gives them a grant towards the operational expenditures "per pupil per year". This is intended to match the equivalent public expenditures of the municipal schools, less the fees paid by the parents of the pupils in the private schools. In 2002, the average grant towards the operational expenditures per pupil per year amounted to DKK 41 100 and the average fees paid by the parents amounted to DKK 7 600 (Communication from the Danish Ministry of Education).

Private schools in Denmark may be roughly divided into the following categories:

- Small "Grundtvigian" independent schools in rural districts;
- Academically oriented lower secondary schools;
- Religious or congregational schools;
- Progressive free schools;
- Schools with a particular pedagogical aim, such as the Rudolf Steiner schools;
- German minority schools.

Parents can request that their children be taught some optional subjects. For instance, German and French are offered as a second foreign language (in the 7th to 9th year); French or German as a third foreign language; word processing; technology; media; art; photography; film knowledge; drama; music; needlework; wood/metalwork; home economics; engine knowledge and other workshop subjects; and various vocational studies (in the 8th to 10th year). Furthermore, Latin may be offered to the pupils in the 10th year.

Parents can also enrol their children in a residential or non-residential *Efterskole* environment. Children can attend from year eight to year ten – a maximum of three years, though the overwhelming majority attend for only one school year. The first *Efterskole* was established in 1815 by Kristen Kold, who wanted to build a bridge between the end of compulsory education and "popular" education to keep the young people between the ages of 14 and 18 "mentally alert". Until 1970, two-thirds of the *Efterskole* were based on the ideas of Kold, and the majority of the students came from rural areas. In 1967, the *Efterskole* were allowed to prepare the pupils for the final examinations of the *Folkeskole*.

Today the *Efterskole* is approved and subsidised by the state provided it is an independent, self-governing boarding school offering general education to pupils between 14 and 18 years of age, often with a curriculum specialisation (gymnastics, for example). The school leader designs its curriculum according to the ideas and wishes of the school board, the teachers and the parents. Most *Efterskole*, however, prepare their students for the same final examinations as are undertaken by the *Folkeskole*.

Some *Efterskole* focus on special education and offer practical work as a special opportunity for late developers and "non-bookish" children who have failed to thrive in the ordinary school system.

Students are entitled to state support and municipal councils offer additional support. In general, parents pay 28-51% of the cost of education, board and lodging. The average amount paid is 42%.

Finally, parents can formally request a place at any of the upper secondary institutions, although their children may face an entrance examination if their grades are below those normally expected for the gymnasia.

Of course, such choices depend to some extent on knowing that the choices exist as well as on a family's geographical circumstances; not everybody will live near enough to the school they favour for all the choices to be realistic. Furthermore, some provision – such as residential schooling – will involve extra expenditure, although grants are available to help parents on low incomes.

Our Team has been impressed by the range of choices available to parents. Denmark, it seems to us, takes choice seriously and provides support – governance and financial help – to those who wish to avail themselves of it. And, in the last resort, parents are entitled to start their own schools – provided they can attract a minimum number of students – and claim state support.

Active role of parents

Parent power appears to be a reality in Denmark. Parents can exercise considerable choice over the school their child attends. They are involved – with the child and the teacher – in setting individual goals. They have the right to file complaints. The child will normally be with the same group of children from year one to year nine. In very few cases a child can advance or be held back one year. In that case a decision from the school leader requires an acceptance by the parents in order to be legitimate. Finally, as we have

noted and according to certain conditions, a group of parents has the right to set up its own private school.

Parents play the key role on the school boards – always in the majority and always taking the chair – which provide the governance for all *Folkeskole*. They also have an association of school board members which provides national representation and training to its members.

We have been impressed with the manner in which Denmark appears to offer real power to parents over many aspects of the education system as well as over the education of their own children.

Dedicated school leaders, teachers and support staff

We met a number of impressive school leaders, teachers and support staff working in the schools we visited. These educators appeared to have adequate time for preparation and marking. They also enjoyed the opportunity, within their contractual time, for many team meetings about a variety of subjects. Sometimes, these took place under the auspices of the schools' pedagogical councils. The teachers can work in teams and can institute innovative practices. Their knowledge of individual students and their problems, and their concern over the well being of each student, was clearly evident in our visits.

Whilst, later in this report, we will raise questions about the adequacy of training and the optimal use of resources, it is our view that the existence of such a professional body is essential to the success of any system.

Adequate premises, equipment and personnel

We were impressed with the general quality of the buildings we visited. Although some were old they appeared to have been well maintained. There was very little evidence of wilful damage or graffiti. The amount and quantity of equipment also appeared more than adequate and, in some cases, schools were outstandingly well equipped. Where we visited libraries these were well stocked. Computer equipment appeared to be in good supply and the OECD figures confirm that the system has one of the most favourable ratios between students and computers. The "drivers' license" certificate which recognises teachers' competence in information technology appears to have been successfully implemented. The facilities for physical education and sporting activities appeared good.

We observed the innovative and highly efficient use of facilities in one school in Copenhagen where after-school care was located in the same premises that the children used during their school hours. This provided a

safe environment for the students, as well as facilitating communications between teachers and pedagogues (child-care staff).

The average class sizes in Denmark are comparatively small. The OECD figures show them to be 19 for primary and 18.6 for lower secondary, larger than only Iceland and well below the international average of 22 at primary and 24 at lower secondary levels (OECD, 2003a, Table D2.1, p. 210).

Table 6.2 Ratio of Students to Teaching Staff for Primary and Lower Secondary Students

Country	Primary	Lower Secondary
Denmark	10.0	11.1
Canada	18.3	18.4
Finland	16.1	10.9
Norway	11.6	9.3
Sweden	12.4	12.4
United Kingdom	20.5	17.3
OECD	17.0	14.5

Source: OECD, 2003a, Table D2.2, p330.

The figures in Table 6.2 are calculated by dividing the number of students by the number of teachers (expressed as full time equivalents). As may be seen, Denmark has the most favourable ratio in the primary column and the third lowest in the lower secondary (next to Norway and Finland). Interestingly, of the countries shown, two (Canada and Sweden) have virtually identical ratios for both categories of classes.

Finland, Norway and the United Kingdom have more favourable ratios in the older groups of students. Finland has a policy of gradually raising its staff funding from pre-primary up to lower secondary on the rationale that problems will be more frequent amongst older students. The United Kingdom has a similar outcome but has recently been making efforts to reverse this policy on the grounds that money invested in very young children will pay off at a later date. Only Denmark appears to have invested systematically in smaller ratios in the primary years.

The measure illustrates the actual staffing available to the school. It cannot be used as an indication of class size, however, as this depends on the way the teachers are deployed within the school. That deployment will take into account the amount of time allowed for preparation, meetings and other non-teaching activities.

Confident young people

We were assured by those we met that Danish schools produce confident young people. The PISA data show that Danish youth, to a greater extent than young people from other countries, have high self-esteem and feel they control much of their own education. These feelings contribute to the self-reliance that PISA found amongst Danish students and was borne out by all those students we met. They displayed impressive self confidence (as well as outstanding English language skills).

Happy students

All of the students and parents we encountered stressed how pleased they were with the schooling offered. In this respect their views were similar to the general view expressed to us by the Parents' Association that, on the whole, Danish students are happy to attend school.

One of the main reasons for these positive attitudes is likely to be the good relationships that appear to exist between teachers and their students. Data from the PISA study show that students from Denmark scored relatively highly on the "sense of belonging" scale. They also show that over 60% (in comparison to an OECD average of 56%) of the sample believed that their teachers showed interest in their learning.

Strong support for students

The Danish education system offers considerable support to its students. All schooling is free. Charges for out-of-school leisure activities are modest and grants are available for those facing financial difficulties.

We were impressed with the resources dedicated for use by the severely disabled in one school which shared its site with a primary-age *Folkeskole*. We were less impressed with the opportunities available for mildly disabled students as we will discuss in the next chapter.

Reduced gender differences

The PISA reading literacy data illustrate that, although there are differences between the sexes in Denmark, they are relatively small. In Denmark, as in most countries, girls outperform boys in reading skills but the difference between their scores was considerably less than the OECD average and was half the size of that found in the Finnish sample.

However, in both mathematical literacy and scientific literacy the gender differences within the Danish sample were larger than any of the reference countries and, in both cases, showed females performing less well than males. We interpreted the small differences between female and male scores in reading as positive, a feature of the striving for equity in the Danish system. One of our Danish respondents, however, suggested that this could also be seen as a sign that Danish female students – unlike their Nordic counterparts – failed to capitalise upon the linguistic superiority over boys that is found in most other countries.

Integration of bilingual learners

In the school year 2002/03, there were 55 812 (or 9.5 %) bilingual learners in primary and lower secondary schooling. Bilingual students can be defined as: "…children who have a mother tongue other than Danish, and who first learn Danish through contact with the surrounding community, possibly a school…", (National Board of Education Centre for Professional Development, 1997, p. 133). Official policy states that:

> The Government wishes to see a society where diversity and personal freedom flourish, together with a community based on fundamental values. There must be room for diversity and room for cultural and religious activity. The right of the individual to choose his/her own life must be respected (Danish Government Policy Paper, 2003).

This is a worthy aim and one which fits well with the dominant values of the education system. Later in this Report we will raise questions about the level of provision for these 55 812 bilingual learners but we remain impressed with this stated aim.

Scope for innovations

One of the benefits of such a decentralised education service is the freedom that local authorities and groups of parents have to innovate. There are many such projects and we were only able to witness a few but we were impressed by a number of examples.

- Experimental integration of schooling and after school care in a school in Copenhagen.

- The model of flexible schooling and the project on gifted children adopted in schools in Lyngby Taarbaek.

- An experimental approach which has created a lower secondary school resourced with extra information technology equipment rather than an extensive library of textbooks in Copenhagen.

- The institution of system-wide screening of students for language difficulties in Ishoj.

- The adoption of portfolios as the principal learning tool in schools in Aarhus.

- The early-morning special-needs support organised by a small rural school in Rudkobing.

Whilst such projects need careful evaluation, it is a demonstration of the strength of the system that they exist.

Desire for improvement

As noted in the last chapter, the Ministry of Education inaugurated a millennium programme for improvement which lasted from 1998 to 2001. It set out very clear aims for the schools:

> The school is to give the pupils knowledge and proficiencies. It is to develop awareness, imagination and an urge to learn, and it shall introduce the pupils to the Danish society ... There is general agreement about the necessity of:
>
> - General subject-specific skills, *e.g.* in reading/writing/arithmetic;
>
> - Foreign languages and the use of information technology;
>
> - Personal qualifications such as creativity, cooperation, independence and intellectual skills;
>
> - Specific competencies related to working life.

Globalisation and the transition to a "knowledge and learning" society will have an influence on the qualification requirements of the future and intensify the need for life-long learning. At the same time, it will intensify the demands on the *Folkeskole* as a community – and equality enhancing factor (*The Folkeskole in the Year 2000*, 2003).

Furthermore, all the local government representatives we met (and especially the mayors) stressed their support for improvement. The Review

Team was impressed with their interest in, and commitment to, the *Folkeskole*. We believe that a national school improvement project would garner support from the local authorities.

We also recognise the request for the OECD review by the Danish Government to be a clear sign that it has a desire to improve the existing system by drawing on international experience and recognised good practice. With only one or two exceptions, we report that the responses to our questions have also been positive across the whole range of our respondents.

Conclusions

The points we have noted illustrate a number of the unquestionable strengths of the *Folkeskole*. Because our review, of necessity, is limited, we have undoubtedly omitted numerous other positive features. Nevertheless, the account as it stands is impressive and Danish educators, whilst being anxious for further improvement, should be proud of all the positive features of the *Folkeskole* which have been built up over the years. Our next chapter will endeavour to balance the picture by presenting an account of the weaknesses that we also observed.

Chapter 7

Weaknesses of the Lower Secondary System

Abstract. The Examiners were concerned about weaknesses in the quality and equity of education outcomes. These weaknesses include a broad pattern of underachievement, a lack of evaluation of student and school performance, a reluctance to challenge students, weaknesses in pre- and in-service training for teachers, an ambivalent attitude towards school leadership, an over-restrictive teachers' contract, little sharing of good practice and a failure to counter the effects of disadvantage.

Introduction

Despite the strengths recorded in the last chapter, the Review Team identified a number of serious weaknesses within the lower secondary phase of the Danish school system. These are related to our central concern about underachievement which we enunciated in Chapter 5 of this Report.

As we have noted earlier, Danish young people perform less well in reading literacy than their reference country peers. They appear to underachieve whether they are socially advantaged or disadvantaged, male or female, bilingual or monolingual. Furthermore, Danish students also underachieve conspicuously in tests of science literacy. It is only in the mathematical literacy section of the PISA assessments that Danish young people appear to perform reasonably well, gaining higher mean scores than their counterparts in both Sweden and Norway.

Our concern, therefore, is with both the *quality* of the Danish system and the *equity* of its outcomes. Following analyses of the PISA data and discussions with those involved with the education system, we have identified 18 issues for detailed discussion. Some of these issues are attitudinal. They stem from the frame of mind, or way of looking at the world, often adopted by teachers and parents. Others emanate from the history or structure of the education system and how it is currently organised. Of course, these two types of issues are not mutually exclusive and a number involve both perspectives.

Underachievement within the *Folkeskole*

The widespread underachievement within the *Folkeskole*, discussed in some detail in Chapter 5, is the central theme of our review and the recommendations we make in the next chapter will relate to this issue.

As we noted earlier, underachievement occurs across the system: there are fewer high flyers, a lower average performance and a greater proportion of those experiencing serious difficulties than might be expected in a modern, sophisticated country with a well-established and well-resourced education system. In comparison to the results from the selected reference countries (Canada, Finland, the United Kingdom) and other Nordic countries (Norway and Sweden), the results are disappointing.

Lack of a culture of evaluation

In our meetings with those involved with schools, we were frequently struck by an absence of informed discussion about the meaning of "standards". There seemed to be comparatively little debate even amongst teachers and pedagogues about what, in today's world, would constitute an acceptable standard of literacy (or mathematics or science) for students of different ages and stages. When we asked how teachers and parents knew how well individuals, or groups of children, were developing, we seemed to uncover a void. Some respondents told us that "teachers just knew" but were unable to point to the *source* of any knowledge other than everyday experience.

Of course, we value the everyday experience of teachers but we are aware of how easily particular experience can limit expectations. Thus, teachers who have spent most of their careers working with poorly achieving students – unless they are particularly vigilant – may lose the expectation that any such student, with support, can nevertheless achieve at a high level. This is particularly relevant where teachers are dealing with students from disadvantaged backgrounds and having to cope with stereotypical low expectations. It thus has direct relevance for the question of equity.

There also seemed to be less use of standardised assessment tasks than we had expected. The purpose of such tests is to provide well-standardised norms of achievement for both teachers and students. In this way both parties are able to gauge how strong the student's performance is in comparison not only to his or her classmates but also to Danish students of the same age.

We have been assured that standardised tests are available for a number of different grades (personal communication from the Ministry of Education). There are certainly a considerable number of reading tests suitable for students of different grades. Some are individual and others are group tests. Some have been tested on large numbers of students; others have comprehensive standardisations which take full account of age differences.

There are fewer tests available for mathematics, and only one appears to provide fully standardised scores. It is possible, however, for Year 9 teachers to re-use the test from the formal examination undertaken during the previous year.

There appears to be a lack of information on how a normal range of students perform at different ages in any subjects other than reading and

mathematics. It must be difficult, therefore, for teachers to gauge how well their students are performing in science or any of the other subjects taught. Each teacher can, of course, judge each student on the basis of his or her individual performance in relation to their immediate classroom peers. But we could not discover what teachers could use in order to judge the standard of the class as a whole. Yet this information ought to have an impact on the teacher's judgement about the achievement of individuals. There appears to be few available yardsticks other than a teacher's own cumulative experience or the collective view of his or her colleagues.

Yet continuous assessment has a long tradition in the Danish system. We were interested to note that the EVA study of continuous evaluation is critical of current practice. The headline of the English summary of its report states "Confusion of ideas and uncertainty about the relevance of various tools". The report also notes:

> The evaluations conducted by EVA and other documentation reflect that perceptions differ as to which evaluation methods/tools are relevant to continuous evaluation. Moreover, the schools use different terms or identical or very similar methods. (Danish Evaluation Institute, 2004)

We have noted that science is a subject in which Danish students performed badly in the PISA assessments. We note also that no tests or standardised instruments are available to guide continuous assessment in this subject. Could part of the explanation for the disappointing results be the lack of accurate notions of acceptable standards? We will return to this issue in the next chapter.

A further point related to standards is how, in the absence of objective information, teachers are able to give appropriate feedback. Feedback informs students, and parents, about the progress the students have made thus far and provides information as to what they need to accomplish if they are to reach a defined standard. We are also concerned that, within the Danish tradition, much feedback is only given orally and the teacher's views are not recorded on paper.

Moreover, in the absence of objective information we do not know how teachers would learn that international standards had risen. This is a challenge, of course, which does not only apply to Danish teachers. Indeed it applies to teachers all over the world. Although incontestable evidence is not available, it seems to us very likely that international standards have risen with so many countries reforming their education systems and focusing so strongly on improved performance. The ongoing study by Klieme *et al* (forthcoming), suggests that in those countries which did well in the PISA assessments standards have certainly risen.

It may be that any feedback, based on "perceived" international standards, which might have been appropriate five years ago, may not be appropriate today. Yet students entering a globalised world and competing for jobs with their European peers need to receive feedback based on an accurate interpretation of international standards in sufficient time to benefit from this information and, if necessary, be able to modify their learning strategies well before the school leaving examinations occur.

We have encountered young people in other systems who complained that the only time they received what they saw as "written real world" feedback was when it was too late in their school careers for them to have time to use the feedback to alter their learning behaviour and thus to improve their academic performance.

Absence of school self-appraisal

It appeared to us that relatively few in the education service were applying the concepts of evaluation to the schools as well as to students. Only a minority of teachers, school leaders or municipal officials raised questions about how well schools were performing both in terms of quality and equity. Although the President of the DLF noted:

> [T]he importance of the teacher's duty to constantly evaluate him/herself … An effective evaluation procedure should lead to more knowledge-sharing amongst teachers.

And, as we quoted earlier, one parent did inform us that, in her view, there was "too much emphasis on teaching, and too little on learning".

In our visits we also failed to detect a strong tradition of healthy school self-appraisal. Yet the international school effectiveness literature stresses the importance of school leaders and their colleagues constantly monitoring their own performance and asking themselves two challenging questions:

- How well are we doing?
- How can we improve?

Many schools in the reference countries have been involved with school effectiveness research projects which have identified the existence of systematic differences between schools in both academic and non-academic student outcomes over many years (Rutter *et al*, 1994). As a result of such studies, local authorities have launched projects designed to monitor the performance of individual schools and to focus the attention of teachers,

parents and the local community on questions of effectiveness. This has led to many local authorities initiating improvement projects.

In contrast, in Denmark there appears to be relatively little formal monitoring of the performance of schools by the municipalities. In those municipalities where this does occur, there appears to be no machinery for this information to be fed back to the Ministry. Because of this there appears to be an absence of a necessarily dynamic yet *national* view of the effectiveness of schools.

Inadequate sharing of good practice

There appears to be little systematic sharing of good practice between schools or municipalities. We observed many exciting innovations (noted in Chapter 7*)* yet found little evidence that these were being adopted elsewhere or that adequate mechanisms existed for the dissemination of innovative and good practice.

We are conscious that teachers are frequently modest about their successes and that they hesitate to claim that what they are doing is special. We are firmly of the view, however, that the best way to raise standards is by encouraging teachers to experiment with more effective ways of teaching and to monitor closely the impact on learning. But, for this to happen frequently, teachers need to have access to the detail of different models of successful practice and to be encouraged to share their ideas so that professional cross-fertilisation takes place.

Failure to challenge

The Danish tradition of according priority to the social development of children was stressed by many of those with whom we met. It is patently good for teachers to exhibit a "whole-child" approach rather than focussing, exclusively, on cognitive development.

We are concerned, however, that, in a number of discussions, it was reported to us that teachers and pedagogues appeared to consider the development of students' intellectual powers to be less important than that of their social and emotional skills. This seemed to be a commonly held view of how those involved in the early years of schooling thought about children.

If such a view is widespread amongst teachers and, indeed, amongst parents in Denmark, then it would foster a climate in which a high proportion of young learners may be insufficiently challenged intellectually. We are certainly not arguing that students' emotional and social

development is unimportant. It manifestly is. We are arguing that both facets should be integrated to provide the optimum development.

There are dangers in teachers seeking to "protect" students from academic pressure just as there are dangers of schools inflicting too much pressure on young learners. We are concerned that what might have started as a positive approach to the education of children may somehow have ended up diminishing the importance of the intellect and creating learners who feel bored in the absence of sufficiently challenging tasks.

Working in other systems, members of the Review Team have sometimes encountered an eagerness amongst educators to embrace roles other than classroom teaching. We have seen teachers devote themselves to children's social or emotional problems, rather than focussing on the role for which they have been trained. We can understand this attitude, especially among those who work with those from the most disadvantaged families.

Such teachers are acutely aware of the difficulties these students face in their home lives and they come to feel that some of their social problems might be more immediately pressing than any education concerns. As a result, these teachers throw their energy into social or emotional support forgetting, perhaps, that their special role is to aid the children by stimulating and supporting their learning. We believe that, in the long-run, successful education will provide the most effective benefit for those coping with social and family problems.

If a similar attitude has developed to any extent amongst Danish educators, the result would be schools which are warm, supportive places which students like attending but which provide an insufficiently intellectually stimulating culture. This under-expectation may well apply to bilingual students or those from disadvantaged backgrounds whom teachers wish to protect. It thus has relevance for the goal of equity.

Insufficient attention to early reading problems

We are concerned about the level of attention devoted to early reading problems. We are aware of the legislation for providing children below school age with help in case of speech problems and of the extra tuition given to children with a bilingual background. We were informed about a systematic approach to reading programmes in one of the municipalities we visited. We also understand that the *Reading Recovery Programme* developed by Professor Marie Clay is used in a certain number of schools (Clay, 1993). We are convinced that a widespread adoption of *Reading Recovery* could make a difference in Denmark. In our experience, the sooner those children who have made a poor start can be rehabilitated, so that they

proceed along a similar trajectory of progress to their peers, the better the outcome is likely to be.

The lack of intellectual thrust, coupled with insufficient help for those struggling with early literacy, could help explain why Danish students did not perform as well as so many of their international peers in the PISA assessments. Support for such a view comes from the fact that not only was the Danish *average* score below that of the reference countries, but the most disadvantaged students performed particularly badly in comparison with others of similar backgrounds. Thus we concluded that the balance between the social and intellectual development of the young student had become skewed in favour of the social and, as a result, the need to foster intellectual development was in danger of being overlooked.

Failure to counter the effects of disadvantage

In almost all countries where information on the families of students is collected, a strong relationship is found between background and student outcomes: the most advantaged students generally enjoy the best and the least advantaged the worst outcomes. PISA, like all other major international studies, illustrates this profound effect:

> The PISA data show that family background is a consistent source of disparity in learning outcomes in many countries …. students whose parents have better jobs and higher levels of education attainment and who are exposed to more educational and cultural resources at home tend to have higher levels of literacy performance. (OECD, 2003b, p. 184)

It is important to note that while this effect occurs within major *groups*, it is not an inevitable outcome for *individuals*. All societies will have exceptional citizens who emerge from disadvantaged backgrounds to achieve great things. There are also some outstanding cases where the sheer weight of the disadvantage appears to stimulate the energy of the person so that they determine to "buck the trend". Such people are, however, exceptional; a much more usual outcome is represented by the PISA quotation cited in the last paragraph.

In the Nordic countries, where there has long been an aspiration to equity (Husen, 1974) and where there is a tradition of providing state support for the disadvantaged, it might be expected that the relationship between home background and education attainment might have been weakened. The PISA data show that this was the case for Finland (and Iceland) but not necessarily for the other countries. Table 6.5 in the last chapter illustrates how Danish students in the bottom quarter of the

distributions on four of the background factors almost universally performed less well than their peers from any of the reference countries. The one exception was the group of Norwegian students in the bottom quarter of the scale of cultural possessions who obtained a marginally lower average score than their Danish equivalents.

We, like so many of those with whom we discussed the issue in Denmark, found these data surprising and disturbing. If the results had shown that the overall Danish average was lower than expected but that the usual negative relationship between successful outcomes and the disadvantaged backgrounds of students had been weakened, then it would have shown that the education policies pursued by Denmark over a long period of years had been moderately successful. It could be argued that the gain in equity may well have compensated for some loss of quality. The results, however, tell a different story: measures of both quality and equity are equally disappointing.

One of the likely reasons for this finding has already been noted: the lack of focus on cognitive skills in the early years of schooling. We know that this approach generally affects children from more advantaged homes less than it does others. The reason for this is that those parents who have themselves benefited from successful schooling are more likely to value the benefits of literacy. As a result, they will generally be better equipped to offer skilled help and support to their own children.

Paradoxically, by increasing the opportunities for parents to be engaged with the learning of their children, the Danish tradition of parental involvement may have exaggerated the impact of socially advantaged parents. One concomitant of parental involvement projects perhaps needs to be the identification of alternative sources of assistance for those children whose parents are unable or unwilling to help them.

We investigated the PISA data to see if one home factor in which parents are involved – the amount of homework being regularly undertaken – would provide some clues to the different outcomes achieved by the reference countries.

Table 7.1 Mean Amounts of Weekly Homework

Country	Mean Weekly Homework Hours	Standard Error
Denmark	4.7	.06
Canada	5.0	.04
Finland	3.5	.06
Norway	4.3	.06
Sweden	3.3	.06
United Kingdom	5.4	.06
OECD average	4.6	.02

Source: OECD, 2001a, Table 7.6 p300.

As can be seen from the table, however, only Canada and the United Kingdom had higher levels of reported homework than Denmark; the other three Nordic countries had considerably lower levels. This measure is difficult to interpret. Generally, the most committed students want to take a lot of time doing homework whilst weaker ones may have to use more time than others. Such distinctions should, however, even out across the large country samples.

The data suggest that in Denmark (and in the United Kingdom) homework – and the parental support that accompanies it for some, but not all, students – might contribute to the lack of equity. For families where parent and child work productively together, there may well be many other benefits for both parties. But those students who do not receive such parental support are likely to fall further behind their peers. In order to deal with this problem Alberta provides a longer school day for its students. Canadian educators believe this extra time in school reduces the need for extensive homework and thus avoids this problem. They also think it provides a better and safer environment for children.

In Finland, where there are no national rules or guidelines on homework and teachers vary in how much work they require to be undertaken, students sometimes undertake homework during their free time whilst in school. Students at the beginning of secondary schooling are given systematic guidance by teachers and school counsellors. Even so, some parents seek to pressure schools into more regular commitments to homework.

Before dismissing homework as a negative activity, likely only to increase the achievement gap between the advantaged and the rest, it should be noted that its effectiveness will depend on the kind of task that is given, the regularity of its occurrence, the assiduousness of its marking and, finally, the availability of alternative support structures for those children whose parents (as we commented upon earlier) do not help them (Hallam, 2004).

The key point is that children engaged in learning need focussed time by themselves when they are not being "instructed" in order to think, assimilate new knowledge, and test themselves by using it. The location for these activities is less important than there being adequate opportunities for them to occur. The next issues concern structural issues within the education system.

Ambivalent attitude to school leadership

In the course of our visits across Denmark we gained an impression of a prevailing ambivalent attitude towards the role of school leaders. On the one hand, school leaders are recognised as essential coordinators of the work (especially counting the hours of teachers) of the school. On the other hand, their role as managers appears to be underplayed, as if a "too powerful" school leader might detract from the teachers' autonomy. If we are right, we think this ambivalence is regrettable.

We consider that such complex organisations as schools need highly skilled leaders. We acknowledge that leadership is not the same as management. In our view, both roles are vital. Management skills are necessary to ensure that resources – including, especially, human resources – are used wisely. Collections of students and school staff, however, also need inspirational leaders who can galvanise energy, promote the institution and focus on priorities. Such leaders in other countries tend not to lessen the role of teachers but, rather, to enhance it by acting as teachers' champions.

We perceive that school leaders, like teachers, find themselves increasingly under pressure. We consulted their representatives and were informed that they see their jobs as having changed quite radically with the *Folkeskole* Act and with the change of teachers' employers from the state to the municipalities. School leaders, particularly, found the process of negotiating with the Teachers' Union time consuming, pointing out that "working hours" were dealt with at three levels: nationally, municipally and within the school, with the result that hundreds of different agreements currently exist. School leaders valued the administrative support provided by some municipalities and regretted that this was not universally provided.

Thus school leadership does not appear to us to be sufficiently valued within the school system. The *Folkeskole* Act lays out the responsibilities for school leaders but – it appears to us – places insufficient emphasis on the academic leadership. We include within this term the responsibility to strive for equity amongst all students no matter their family background. Full training and a period of mentored support would clearly help change this perception of ambivalence and help flesh out the role of school leader.

Inadequate pre-service teacher training

The training of teachers to work in the *Folkeskole* is currently organised outside the universities at 18 self-governing colleges of education. (Two small special colleges offer training for teachers wishing to enter the private sector. Graduates from these colleges wishing to teach in the *Folkeskole* have to pass further examinations.) Following the 2001 reforms, all 18 colleges have merged, or are merging, into 12 Centres for Tertiary Education and In-Service Training (CVUs).

Entrance requirements are identical to university entrance requirements. Training currently lasts for four years and is made up of 24 weeks mandatory teaching practice, pedagogical studies, specialist study in four subjects (Danish or/and mathematics are compulsory) and the completion of a thesis at bachelor level. Successful pre-service training gives the right to carry the title Bachelor of Education.

The EVA has recently concluded a study into pre-service training. From the translated summary that we have seen, it appears that the EVA generally endorses the current model of training, though it makes some minor recommendations for change. These include the need for a greater adherence to the entry qualifications and some adjustment between the pedagogical training, the subject study, research and teaching practice.

Our experience of Danish pre-service training is limited to a visit to one of the colleges and the comments of many of those whom we met in schools. Drawing on our experience within the reference countries, however, we remain doubtful as to whether the traditional Danish pattern of generic training, whereby teachers are expected to teach any subject within the curriculum to all students within the *Folkeskole* age range, can meet, adequately, the demands of today's and tomorrow's schooling.

We understand that the pressure on the pre-service training curriculum, with the need to master pedagogical skills for students with a nine-year span and to study increasingly demanding knowledge in four separate subjects, must be intense. Yet, given the concerns about literacy, we are surprised that a specialised course in the teaching of reading is not compulsory. (It does, however, figure in the "central knowledge and proficiency areas" prescribed for Danish.) We asked a teacher by which age children usually learned to read. The answer was "when they were ready". Given the PISA data on students with reading problems at age 15, we suggest that more debates about reading readiness need to be experienced during training.

We are also concerned that teachers are being insufficiently prepared in how best to support those with bilingual backgrounds and students with

special needs. We question, furthermore, whether, in pre-service training, sufficient attention is currently being paid to the cluster of issues with which we have been so concerned: monitoring, the evaluation of students' progress and the importance of feedback on how to improve.

Finally, we wish to query whether teacher education is optimally sited within the Centres for Tertiary Education and In-service Training (CVUs). In other countries it is often incorporated into universities. In Finland, for instance, all teachers have to reach the level of a masters' degree. This means that the subject-teaching element of the teachers' courses is not provided by college lecturers but by university teachers who are renowned subject specialists. Universities also provide a broader academic environment for the student teachers and an immediate link to those professors undertaking education research.

Insufficient in-service teacher training

A number of teachers and school leaders raised the question of whether sufficient in-service opportunities are currently available. They suggested that, over time, attitudes to learning had changed so much and the knowledge base had increased so greatly that initial training, no matter how good, could hardly be expected to equip teachers for the rest of their careers. Yet we were informed that up to one-third of teachers never attend an in-service course.

It was suggested that in-service opportunities need to be created for whole school teams as well as for individuals. The question we raised about how well evaluation issues were covered in relation to pre-service training applies with much greater force to in-service training. Furthermore, for in-service training, evaluation should include understanding the impact of the individual school on students' progress and judging its efficacy as well as the full repertoire of school improvement. We will return to these themes in the next chapter.

Over-restrictive teachers' contract

The matter of the teachers' contract was discussed frequently during our visits to schools. Few of those people who spoke to us appeared entirely clear about its details. For instance, one person believed the provision for a half hour's additional time as well as the "hour for hour" teaching/preparation correspondence (which had been a feature of an earlier contract) were still in place. Correctly or not, the rigidity of the contract was often cited as the reason why improvements could not be made.

The way teachers use their work time is a major plank of the contract periodically negotiated between the Danish Union of Teachers (DLF) and the Local Authorities' Association (KL) and we obviously respect their rights to undertake such a task in the best interests of both parties. We were surprised, however, by the reports we received that teachers, on average, spent only 34% of their time in direct contact with students. In fact, according to the contract, the figure could be 64% but, because of local negotiations, this was seldom the case.

We were informed in various schools that the conditions of the contract could, in effect, prevent bilingual learners from receiving extra tuition in Danish outside of class hours. We are aware this is a mistaken interpretation of the contract which should not be preventing teachers from teaching. But we realise that there is a weak tradition for providing bilingual learners tuition outside of class hours in Denmark. This means that such bilingual pupils have to be extracted from lessons in other subjects in order to receive the language help to which they are entitled. Accordingly, they miss lessons in other subjects and are likely, therefore, to fall behind their peers. Thus, whilst their command of Danish is being enhanced, their learning opportunities in the rest of the curriculum are correspondingly diminished.

This practice appears particularly wasteful in those schools in which the students are engaged in after-school care in the same building, or close by, and the teachers are also present but unavailable because of commitment to preparation for classes or involvement in team meetings. We are aware, however, that such a programme of extra work would have to be handled carefully so that the students did not regard it as a punishment or as discriminatory towards bilingual learners.

The small proportion of time spent face-to-face with students allows ample opportunity for preparation and marking and coordinating meetings between teams of teachers. Meetings are, of course, extremely important for school staff. It is a strength of the Danish system that communication between professionals is so prized. Priorities, however, have to be exercised.

In one school we visited, it was reported that the Pedagogical Council had scheduled 17 hours of meetings in order to formulate a food policy for the school. Given that there were approximately 60 members of staff, this amounted to over 1 000 hours being devoted to this topic. This appeared to us to be a disproportionate amount of time to assign to a topic which, important though it is, could have been dealt with more expeditiously by a representative committee.

We concluded that a major renegotiation between the teachers and their employers was overdue and that a more flexible outcome should be sought.

Impact of current burdens on teachers

Despite the nature of the teachers' contract, we received a number of complaints about bureaucratic overload. We were told of an increasing number of mandates – from the Ministry, from its administrative sections and from the municipalities. We appreciate that a decentralised system is likely to make more demands on schools than a centralised one but consider that some overlap could be avoided with careful coordination. But, we do not believe that accountability can – or should – be avoided. As in many other countries, schools are currently being held to account by a variety of different people: students, parents, those responsible for the next stage of education and local employers, as well as the different tiers of government.

We also asked about the way the teacher's role had changed. We were informed that, in recent years, some teachers had moved from being "private practitioners" to a role more akin to "professional team workers". Whilst such a modification of role was professionally rewarding, like any other change, adapting one's behaviour from a long-standing pattern was challenging. We were also told that there were constant demands on teachers to increase their knowledge of the subjects they taught.

We consulted school leaders and teachers about the tendency for society to expect more and more from schools and were assured that this was the case. There appeared to be general agreement that children (and their parents) were – for a variety of reasons – more demanding today than they had been in the past. We were surprised to hear that parents would telephone teachers at their homes to discuss school business.

The days of society simply trusting the professionals to do a good job appear to have gone. Parents, and indeed students themselves, are ready to challenge the authority of the teacher if they think there has been unfair treatment. In many countries, some families adopt a hostile attitude to teachers and schools. Given the history and atmosphere of Danish schools this may not be very common, though it was reported to us as a rising tendency.

We were further informed that teachers face a growing number of tasks that, in previous times, might have been considered best dealt with by the family. Partly this has come about because, in most two-parent families, both parents are in paid employment (75% of women are in work). But it is probably also the result of changing attitudes.

It is certainly true that many of the reference countries are also experiencing similar challenges. We recognise the problem but feel that, where both parents are in paid employment and have restricted time with

their children, there is a danger that if the teachers do not undertake such tasks – whilst preserving their priority for the intellectual development of their students – no one else will do so. We accept that such demands, together with the various meetings with pedagogues and staff from the local day care centres, can take up a large proportion of the teachers' available time.

Over-pampered children

It was reported to us that teachers frequently have to deal with "over-pampered children". Parents, because of their excessive devotion to a much wanted child, sometimes fail to train him or her in basic self-management. As a result the school has to provide this training, representing one more task that has to be fitted into the school day. We are sympathetic to this problem (although with 90% of children aged between three and five in day care, it seems to us that it is most likely that it is the pedagogues who have to provide the training). The issue, nevertheless, is important.

A gymnasium school leader informed us that sometimes within family life: "…children have no tasks, conflicts are avoided, priority is given to fun, entertainment and having a good time…" He went on to argue that … "the school has lost its authority … (it) has become an agent in the search for individual identity…" (Gymnasium School Leader, 2003). If he is right, then the challenges for schools are likely to increase still further.

Misbehaviour in classrooms

A number of people commented on what they saw as the inappropriate school behaviour of some school students. Such a view is partially supported by findings from PISA. The index of disciplinary climate (a scale made up of student responses to questions about the frequency of bad behaviour, the largest negative scores indicating the poorest behaviour) showed that Danish students reported a more negative perception of their own behaviour than the OECD average. Their score was considerably more negative than Canada or the United Kingdom although, interestingly, with the exception of Norway, all the Nordic countries had similar below-average scores. As may be seen in Table 7.2, the figure for Norway was -0.36.

Table 7.2 Students' Views of Students' Behaviour

Country	Score on Index	Standard Error
Denmark	-0.20	0.2
Canada	-0.14	0.01
Finland	-0.16	.03
Norway	-0.36	.03
Sweden	-0.19	.02
United Kingdom	0.02	.03
OECD	0.0	.01

Source: OECD, 2003b, Table 7.12. p.372.

In answer to the specific question of whether classes spent "more than five minutes doing nothing" before getting down to work in class, over half the Danish students answered in the affirmative compared to an OECD average of only 35%.

This negative view of student behaviour was in marked contrast, however, to the opinions of principals, as may be seen in the following Table.

Table 7.3 School Leaders' Views of Students' Behaviour

Country	Score on Index	Standard Error
Denmark	+0.73	0.03
Canada	-0.27	0.03
Finland	-0.42	0.05
Norway	-0.21	0.05
Sweden	-0.05	0.06
United Kingdom	0.04	0.05
OECD	0.00	0.01

Source: OECD, 2003b, Table 7.11. p.371.

Danish school leaders had the third most positive score out of all the OECD countries – much more positive than any of their peers in the reference countries, all of whose judgements were below or very close to the OECD average. A discrepancy between school leaders' and students' views

of standards of behaviour is not surprising given that behaviour is notoriously difficult to evaluate and that much activity is ephemeral and goes unrecorded. Standards of acceptability vary even between teachers in the same school.

Clearly, however, the extent of the difference between the two Danish viewpoints is remarkable and indicates either that Danish students, for some reason, over-emphasise their bad behaviour or that school leaders are excessively tolerant of inappropriate behaviour. There appears little reason for the former. If the latter is the case, then this is a serious problem and may go some way to explaining the differential results for Nordic countries.

Communication difficulties between staff

The Danish system employs both teachers and pedagogues to work with children. The differences between these staff are complicated and so the detail will be spelled out. For instance, children below school age attend day care institutions and kindergarten which are organised and supervised by the Ministry of Social Service. In these institutions, pedagogues are employed as core staff. They have a three-and-a-half year training at a training college for pedagogues. They are organised in a union for pedagogues, BUPL. Children in kindergarten classes, however, normally attend school for 4 or 5 lessons each day. Before and after school, they attend a school-leisure time scheme (SFO) often situated at the same school. In the kindergarten classes a pedagogue undertakes the teaching.

Pedagogues are trained in the same way as those working in day care institutions. They are organised, however, in the teachers' union (DLF). In the school-leisure time schemes, similar pedagogues are employed (with the same training and almost the same salary) but these are organised in the BUPL. All the different activities are regulated within the legal framework of the *Folkeskole* Act. But, additionally, it is possible to establish school-leisure time schemes that are regulated through the legislation of the Ministry of Social Service, though, in such cases, pedagogues will still be members of BUPL. For children in years one to three all teaching is undertaken by ordinary teachers, trained in a teacher training college and members of the DLF. The pedagogues who work in the school-leisure time schemes for this age group are members of the BUPL.

In view of this complexity, it would seem essential that effective channels of communication are maintained in order that information can be shared and collaboration can flourish. According to those with whom we consulted, however, this does not always appear to be the case. We were informed that teachers and pedagogues, sometimes, worked independently

without regard for the work of the other. Furthermore, we were told that meetings between the different parties were sometimes difficult to schedule. We were also told that some teachers believed (correctly or not) that they were not permitted to meet with pedagogues during the time allocated for meetings with fellow teachers. We were also advised that teachers and pedagogues were uncertain as to whether confidential information about families could properly be shared between the two professions.

We found the situation, as it was reported to us, disquieting. We appreciate that in certain circumstances the need for confidentiality and data protection may prevent the sharing of personal information. We also understand that ill-founded gossip can be inadvertently translated into official records and that safeguards to ensure that all entries have been carefully checked are essential. But, for what must be the vast majority of cases, we consider effective communication and positive collaboration prerequisites for good practice and, without them, the good work of both groups of professionals is being stymied.

Insufficient support for students with moderate special needs

We understand that special education and special assistance "is provided for *Folkeskole* students whose development requires special consideration or support that cannot be provided within the framework of standard instruction". (Danish Ministry of Education, 2000)

This extra provision can take the form of:

- Special instruction in ordinary *Folkeskole* subjects;
- Individual assistance for students;
- Instruction and training in modes of functioning and working;
- Provision of special material or equipment;
- Specially organised activities to complement educational activity;
- Counselling about special education for parents, teachers and others.

Some extra provision can be provided with the student maintaining his or her affiliation to their class; some cannot. It is provided in a variety of modes depending on the needs of the individual:

- A supplement to the ordinary provision that the student receives in their own class;
- An alternative to some of this ordinary provision;
- A special class established in the *Folkeskole*;
- A special class in a special school (which might be residential);
- A day care centre or placement facility.

The figures for severely disabled students needing to receive "extensive" special education assistance are relatively small. In 1994, such students made up approximately 1% of the school population; in 1999 this figure had grown to 1.4%, though it dropped to 1.3% the following year (Danish Ministry of Education, 2003a, p. 64). Our discussions with teachers and others about provision for this group, which fell outside of our remit, were extremely limited though we were impressed with a visit to a regional special school.

Questions about the adequacy of provision for children with mild and moderate special needs, however, did emerge during our visits to schools. We appreciate that this group – as in all countries – embraces a wide variety of children with problems ranging from intellectual (the poor learners), to behaviourally disturbed or disturbing children. We learned of concerns about whether such students spend too much of their school time separated from their peers; whether ordinary teachers gain sufficient specialist skills in their pre-service training to be able to support them; and whether the expertise held by teachers who had worked under the former system of special schools will be replenished over time.

One way of looking at the performance of those students who are receiving special assistance is by focussing on the bottom end of the distribution of scores in the literacy assessment and comparing them to those at the higher end of the distribution. As can be seen the outcomes are quite different for Denmark and most of the reference countries.

Table 7.4 Mean Performance on Reading Scale by Those at the 5th and 75th Percentiles

Country	Mean Score 5th Percentile	Standard Error	Mean Score 75th Percentile	Standard Error
Denmark	326	6.2	566	2.7
Canada	371	3.8	600	1..5
Finland	390	5.8	608	2.6
Norway	320	5.9	579	2.7
Sweden	354	4.5	581	3.1
United Kingdom	352	4.9	595	3.5
OECD	324	1.3	571	0.7

Source: OECD, 2001, Table 2.3a. p.253

Table 7.4 illustrates that only Norway has a similarly low score to Denmark (and the OECD average) for the 5th percentile. The equivalent Finnish lowest percentile group achieved an average score nearly 20% higher than the Danish group. This can be compared to a mere 6% difference in the averages of the two countries in the 75th percentile groups (where Denmark again achieves the lowest score, well below the OECD average for the percentile).

In Finland a great emphasis is placed on remedial support for students with learning difficulties during the first year of basic education. This is provided in reading, writing and speech by specialist teachers often serving several schools. Remedial help is also given in different subjects throughout the period of basic education.

Our conclusion, therefore, is that a re-examination of some aspects of the way that students with moderate special needs are currently dealt with would be worthwhile.

Inadequate support for bilingual students

Discussions about the needs of bilingual students featured in many of our meetings with educators. In Denmark, there are currently just over 55 000 bilingual students (9.5% of the *Folkeskole* population) – a much higher proportion than is found in Finland, though much less than in Canada or the United Kingdom. As in many countries, bilingual students tend to live in particular areas and to form substantial clusters in certain schools. These students are distributed amongst the counties (with only three counties having more than 12%) and amongst the municipalities (some municipalities having less than 1%, others having more than 35%).

The largest groups of bilingual students come from Turkey (over 11 000), Iraq (over 4 000) and Pakistan, Bosnia and other former

Yugoslavian countries (all over 3 000). The latest group of new students are Somalis. In 1991 there were 199 Somalis in Denmark but, since then, the number has grown to more than 3 000. Not only do the students come from different countries but they also came at different times under different circumstances. The PISA data show that 2.4% of the bilingual students were first-generation Danes whose parents were foreign born. A further 3.8% of the students had been born outside Denmark.

As we noted in Table 5.6, the two groups of bilingual students achieve quite different results in the PISA assessments: the non-native recent immigrants perform much better than those whose parents came to Denmark before they were born. As no other data about the origin, linguistic or social background of the families were collected by PISA it is impossible to know why this should be so. It is in marked contrast to the data of all the reference countries where the first-generation students outperform the recent arrivals. The Danish pattern illustrates the continuing need for language support for bilingual students who have spent all their life in the country as well as for new arrivals.

Official government policy has been to reduce the numbers of families entering Denmark and to try to ensure better integration of those that do so. *The Government's Vision and Strategies for Improved Integration* spells out more than 100 proposals and initiatives based on four chosen principles built around the need: "…to make room for diversity and learn how to profit from it". (Personal Communication from Ministry of Education)

We recognise the challenge to school organisation posed by students for whom Danish is not a first language. We commend the efforts being made in some municipalities that have created special teams of educators to support teachers and have amassed specialist expertise. We were particularly impressed with municipalities which sought to provide specialist teachers of Danish who also spoke the mother tongue of their students, created special in service courses for teachers or which had undertaken municipality-wide screenings of students' linguistic needs.

We realise that such initiatives are costly and that the burden of providing special services can be onerous unless it is shared fairly. We are aware that those municipalities which have only a small proportion of bilingual students also need to make special provision and that, in such circumstances, obtaining the requisite expertise can be difficult.

As in many other countries, there is a danger that cultural and linguistic difference can be mistaken for intellectual impairment or behavioural disturbance. It was reported to us that a higher than expected number of bilingual students could be found in special schools or in receipt of special education provision in *Folkeskole*. This was certainly true of one

municipality we visited where 11% of all bilingual students were in special classes in contrast to only 5% of the non-bilingual students (Ishoj Municipality).

We asked about why such a difference should occur and were informed that it was likely the result of a mixture of factors: a possible cultural bias in test materials; the existence in some peoples' minds of a deficit model which sees non-Danish speaking children as "problems"; insufficient supplementary provision for Danish as a second language; the accumulation of language problems into learning difficulties; the existence of a group of families with insufficient resources to cope; and shortcomings in the in-service training available for teachers. Unfortunately no national data exist to clarify these issues.

Many of the reasons cited above require major interventions. It seems to us, however, that the point discussed earlier – that bilingual students have to miss lessons in other subjects in order to take advantage of extra help with Danish – has particular relevance. If this is as widespread a practice as was reported to us, it is surely a very unintelligent solution which could relatively easily be modified so that the bilingual children could be better supported and some of the other problems possibly be avoided.

Conclusion

These issues, in our judgement, represent some of the most pressing weaknesses in the Danish education system. As we have argued, the Danish primary and lower secondary system possesses many strengths but, as the PISA data have indicated and our Review has confirmed, it also retains a number of significant weaknesses within its structures. We have already made the point that some of the problems stem as much from prevalent attitudes as from the system itself. We sense that the *Folkeskole* system may, itself, have grown rather complacent and, as a result, its quality may have declined.

Such complacency means that teachers may not be sufficiently ambitious on behalf of their students. They should be. The country has many advantages: a strong democratic tradition within Europe; a diversified economy, which gives Denmark the second highest GDP in the European Union; powerful social traditions; a vibrant culture; and a manageable-sized population. All of these conditions are ones that young people growing up in other parts of the world would envy, yet, despite these advantages, the quality of schooling in the *Folkeskole* remains questionable.

We are also concerned about the lack of equity. In comparison with the education systems of the reference countries, Denmark appears to be failing

to offer its students an equal chance of success. Teachers have good conditions of service and the system is well resourced. Yet, somehow, these positive features have not produced the desired outcomes for the least advantaged students – those with the most to gain from the education system.

In the next chapter, we will present our strategy for improvement. We will outline remedies that are familiar to us through our work in the reference countries. These remedies have been proposed in order to deal with the weaknesses we have described, whilst building, where possible, on the strengths which we documented earlier. We hope that full consideration will be given to our suggestions though we recognise that solutions – if they are to work – will need to be adapted to fit with Danish culture and traditions.

Chapter 8

Strategy for Improvement

Abstract. The reviewers proposed 35 specific recommendations in several areas for improvement: learning standards; evaluation of student performance and school effectiveness; school leaders; pre- and in-service training for teachers; the collective agreement regulating the roles and hours of teachers; opportunities for bilingual and special needs students.

Introduction

The recommendations made in this chapter have been devised to assist in the improvement of Danish education. As foreigners, we are fully conscious that we will have seen only a fraction of the system and that we may have misunderstood the importance of some of what we did see. We are also aware, however, that being an outsider can bring advantages and that certain features – both good and bad – are more easily detected by those unable to take them for granted.

We are mindful of the many strengths of the Danish *Folkeskole* system. The need to preserve these has been a constant theme of our deliberations. We remain convinced, however, that improvements are possible and, in our view, essential if Denmark is to continue to flourish in the future. This is a difficult point to assert, for there will be many who will argue that the Danish system has served the country well up to now and that it is likely to go on doing so.

We are impressed that the *Folkeskole* system has produced a nation that is economically highly successful. As we have already noted, it has the second highest GDP per person in the European Union yet has maintained its traditional approach to the equalisation of income. The Background Paper noted the words of the N.F.G Grundtvig song, "few have too much and fewer too little" (see Chapter 1).

Denmark has also been socially successful – as the Background Paper again reminds us – with individuals being respected on their own terms and, provided that they are not harming anyone else, being permitted to lead the lives they want. Today this mutual trust, and the social cohesion it produces, is perhaps changing in response to the challenges of immigration but, nevertheless, compared to many other countries, Denmark appears to be at ease with its identity as a modern state.

This economic and social success makes our question of whether the existing education system is an appropriate model for tomorrow all the more pertinent. In view of the time required to change education systems and for the outcomes of such changes to become apparent, there is an urgent need for scrutiny, reflection and, where appropriate, remedial action.

The PISA test results are perhaps the clearest, but also only the latest, warning signals about the questionable standards of achievement of many young Danes and our Review confirms that many within the education service, as well as external stakeholders, are deeply concerned about the future development of the system. The challenge facing those responsible

for the system is how best to heed such a warning, and what appropriate steps to take in order to secure improvement without inflicting too much damage on the positive aspects of current practice.

Our recommendations have been designed to aid these processes. When she met with us at the beginning of the Review, the Minister of Education invited us to make bold proposals. We have endeavoured to follow her advice.

Action to counter underachievement

As we argued in the last chapter, the PISA data reveal systematic underachievement within the *Folkeskole*. Although these data are a snapshot of performance at one time and cannot be used to demonstrate causality, we believe that they provide a sufficient basis for informed judgement on future policies.

The evidence evoked by our Review has further emphasised the need for action. We believe it is imperative that the current culture of the *Folkeskole* is modified so that it routinely generates higher achievement for all its students. Furthermore, as we noted in Chapter 5, the level of spending on education, by OECD standards, is high. Yet the results, in general, fall significantly short of those found in comparable countries which spend less on education. This does not represent good value for money especially when "opportunity costs" (the alternative goals not pursued) are taken into account.

Government action

We know that the Minister and the municipalities are committed to countering underachievement. We suggest that the Minister of Education and her officials in the Ministry take the lead in promoting discussion of the OECD Review in the national newspapers and other media. This will overlap with the publication during December 2004 of the next tranche of the PISA assessment programme.

In the time available to us, we could not form a judgement on whether the distribution of powers and responsibilities between the various partners involved in the oversight of the *Folkeskole* is appropriate. We have studied the new clauses on greater accountability in the *Folkeskole* Consolidation Act of 2003 (Danish Ministry of Education, 2003b). In particular we have noted the increased powers of the Minister to set national attainment and final targets and to provide curriculum guidelines and support material. We see a national standard as helpful, given the mobility of families and

students. We understand that there is to be a modernisation of tests, examinations and marks.

We have also noted that the Minister has taken powers to lay down regulations for the content of the pre-school class and that, for the first time, day care centres will have to draw up learning plans so that a positive early start can be made by those children who are growing up in vulnerable circumstances. These are important prerequisites for change but they will not, by themselves, achieve it. Concrete actions by all involved must follow.

We recommend *that the Minister considers whether further legislation is necessary to deal with any of the issues we raise in our Report.*

In addition to this action, ***we recommend*** *that the Minister, in cooperation with the Association of Municipalities, the Danish Union of Teachers and other relevant stakeholders, initiates a public debate on expectations, policies, practices and outcomes of the primary and lower secondary system.*

If the government, the municipalities, the National Association of School Parents and the Teachers' Union can work together on the ideas generated by our recommendations, the prospects for improvement look promising. The government will have to restrain itself – too much central action could be counterproductive, especially in a country where local traditions and customs are deemed so important.

Local authority action

We believe it is crucial that the municipalities, supported by the Local Authorities' Association, do all they can to counter underachievement. Already municipalities have been accorded new powers to define "standards" for the schools in their jurisdictions. They now need to adopt school improvement as their top priority. We trust that municipalities will contribute fully to a national debate on expectations and outcomes. This is a critically important role for the mayors of municipalities and well as for their directors of education.

Other partners' actions

Parents tasks

The National Association of School Parents will also need to play a key role.

We recommend *that it works with chairs of school boards to consider the implications of our recommendations*.

The children of its members will have much to gain from the reduction of underachievement but, as we know from research into any reform packages, change can be disconcerting and resistance often a popular reaction. It would be unfortunate if parents failed to support the need for change.

Teachers' tasks

The Danish Union of Teachers (DLF) has a crucial part to play in any changes. Many of our recommendations affect it directly. Its reactions and the strategy of its senior officials to the notion of underachievement and the remedies we suggest will be of great importance. We are convinced that true improvement depends on the energy and commitment of teachers inspiring the students. In contrast, the other players – Minister, municipalities and even parents – only have supporting roles. They can set frameworks, formulate regulations, manipulate rewards and undertake many necessary supportive roles but, ultimately, what will produce genuine improvement is the extra effort and enhanced understandings that teachers can evoke from the students in their care. We hope that the DLF will support all the proposed changes and use its considerable power and influence to encourage its members to do likewise.

> ***We recommend*** *that the DLF works with chairs of the Pedagogical Councils to consider the implications of our recommendations.*

Furthermore, we enjoin the DLF to commit itself to the national debate on expectations and outcomes recommended earlier.

We now address each of the other issues we highlighted in the last chapter. Although we will make a number of *specific* recommendations addressed to those with responsibilities for different aspects of the system, our conviction is that the culture of the education system needs to be transformed so that it is more collaborative and that *all* the adults accountable for, and concerned with, children pursue more fiercely children's intellectual development. We are convinced that collaboration between the various partners in the education system is the only way that a culture of continuous improvement – likely to lead to the very best outcomes for the nation's young people – can be accomplished. The strength with which these ideas are embraced by parents and Danish society in general will, in our view, determine whether or not there is lasting improvement.

Creating a culture of evaluation

Given that a large segment of Danish society appears to have taken for granted the success of its schooling and that the judgement of its efficacy, in

relation to that of other systems, has been possible only on rare occasions, the establishment of a new culture of evaluation is bound to be difficult. Yet this is probably the most important single change that needs to be achieved if other measures are to be effectively implemented and standards are to rise.

The idea of evaluation is already firmly embedded in the Danish system, as the series of publications arising out of the project *The Folkeskole in the Year 2000* illustrates. This Project was undertaken jointly by the ministry, the Local Authorities' Association and the Danish Union of Teachers. Topics and themes included: *Quality and development - expectations and results, Challenges for the individual pupil* and *'Knowledge and Proficiencies* (Danish Ministry of Education, National Association of Local Authorities, Danish Union of Teachers, 1998). Unfortunately the idea of evaluation does not appear to have permeated the reality of everyday life in many schools. Rather, as we commented in the last chapter, we found little evidence of hard-nosed evaluative approaches to student work. We believe that most students benefit from objective evaluation as long as this does not diminish their self confidence. Such evaluation provides a model for a self-critical stance which can foster learning when paired with a belief that, with suitable hard work, he or she can eventually achieve the standards to which they aspire.

The basic model for evaluation is straightforward. The class teacher, school leader and municipal director of education – basing their judgements on agreements between ministry officials, the Parents' Associations and the Teachers' Union – prescribe the standards deemed appropriate to particular stages of schooling. This pre-set standard is presented to students as the level to which they should aspire (there should always be opportunity to exceed this standard and aim higher). The monitoring of the students' performance then follows with appropriate remedial attention being provided for those who do not reach the acceptable level.

> ***We recommend**, therefore, that a Task Force be established by the Minister, jointly with the municipalities and the Danish Union of Teachers, to determine expected benchmark standards for different age groups in the main subjects of the curriculum.*

In practice, achieving such theoretical clarity may prove a considerable challenge. The definition of acceptable standards can be taxing, seeking unanimity from so many players may be over-ambitious, and monitoring how well standards have been reached will be easier in some subjects than in others. Resolution of these difficulties may require the Minister to exercise her powers of oversight of the system.

Providing more accurate feedback

We recognise, as we have just noted, that classroom standards are sometimes difficult to define. In which ways does work being awarded a top mark differ from that gaining a moderate mark? Many students, if they have not had their attention drawn to exemplary work, simply cannot imagine how much better their work could be. (Or, indeed, how superior the performance of young people from other countries can be.) This is what objective feedback – especially when written down rather than provided in the more ephemeral spoken form – can provide: knowledge of what is possible and some guidance of how to work towards its attainment. We understand that the Ministry is working on a project to create a bank of exemplary practice. We support this approach in the hope that it will disseminate benchmarks for teachers to use when they judge the standard of students' work.

Encouraging self-evaluation

In similar vein we assert that each teacher needs to challenge his or her own performance. In the United Kingdom, the Open University pioneered a self-evaluation exercise in which teachers would ask themselves five simple questions at the end of a sample of their weekly lessons.

- What did I do?
- What did my students do?
- What did they learn?
- What did I learn?
- What will I do differently next time?

The results from the Open University show that simply by asking such questions teachers radically alter their attitudes and behaviours. This project created amongst its participants a more self-critical and more reflective approach to teaching (Open University, 1981, p. 234). Where teachers work in pairs, the shared use of data generated by answering such questions can provide each teacher with accurate reciprocal feedback on his or her own performance. Self-evaluation may sound like a soft option but writing it off as such would be wrong. True change occurs in the classroom when teachers *themselves* recognise its need and work of their own volition towards it. More draconian attempts to force teachers to change their behaviour are

usually subtly subverted or met with downright resistance. Like most other professional workers, teachers respond to hostile criticism by erecting defensive barriers from which to resist change. Hence the value of an alternative strategy which provides teachers with insights into their own behaviour and couples this with a colleague's (who themselves understand the pertaining classroom conditions) suggestions of how to improve.

Making self-evaluation reciprocal so that each teacher is both critic and, in turn, the subject of criticism is important. The fact that teachers, as well as students, are engaging with new insights about their own behaviour creates what Canadian educators term a "learning community". "The vision for Alberta's schools involves every school operating as a professional learning community… Teachers need experience and support in how to work collaboratively, share insights and ideas and work as a team" (Alberta's Commission on Learning, 2003, p. 115). In Finland, too, the National Board of Education has developed several self-evaluation instruments on its internet site.

With such examples in mind, ***we recommend*** *that the Minister, jointly with the municipalities and the Danish Union of Teachers, funds a research project to support the development and dissemination of methods of teacher self-evaluation.*

Developing school self-appraisal

The development of an evaluation culture must not stop with class teachers. The school leader and the school board also have a part to play, asking similar questions about the performance of their schools as part of a self-appraisal approach. Questions such as: "Given our intake of students, how much have they learned through their experience in our school?" are crucial. Such challenges pose the difficult question of whether it is possible to disaggregate the contribution of the school from the contribution of the students' individual and familial endowments. The concept of "value added" is often used to do this. This value-added can be defined as "an indication of the extent to which any given school has fostered the progress of all students in a range of subjects … from entry until public examinations … in comparison with the effects of other schools…", (Mortimore, Sammons and Thomas, 1997, p. 24).

In other words, if a child had gone to a particular school would it have led to a better outcome than if he or she had gone to any other. The concept of value added enables parents to distinguish between two different kinds of evaluations; that of the progress of their child and that of the quality of the school. Parents can first ask: "How well is my child progressing?" They can

then ask: "How well is the school attended by my child performing?" Their understanding of the child's progress will depend on the answers to both those questions. If their child is failing to progress, but the school appears "effective" for similar kinds of students, then they are dealing with an individual problem. But if the school is also ineffective for similar students, then they need to put pressure on the municipality to intervene in order to attempt to improve it.

Focusing on school effectiveness

Ideally standards need to be pre-set for schools (just as we argued that they needed to be for individual students). The complicating factor is that schools do not receive uniform intakes of students: some will receive high proportions who have benefited from the cultural capital of the family; others will receive those who have had to cope with disadvantage from birth. Denmark is particularly prone to large differences in the intakes to schools, as we discussed when we dealt with the issue of between-school variation. The challenges facing different schools in how they achieve the education of their particular intake of students, therefore, may be quite dissimilar. A way has to be found, therefore, of equating these differences before judging the efficacy of the school.

The problem with this approach to school evaluation is that, in order to take account of the different school intakes reliably, parents and municipal officials need access to data about the progress of students through schools. Few countries have yet established mechanisms to provide exactly this sort of information to parents though some provide it for local authority use. As far as we know, no local authority in Denmark has yet created such sophisticated methods of analyses.

We recommend *that Copenhagen – as the largest municipality – considers the development of a research and statistics capacity to pilot appropriate data collection and analysis of the concept of value added.*

However, even before such work has been undertaken and any *definitive answers* are available, asking *the question* may still be worthwhile for members of school boards and for municipality directors of education concerned with groups of schools and charged with raising standards.

Ways of undertaking national monitoring

We are convinced that there needs to be an ongoing overall evaluation of the nation's schools by the Ministry of Education. This need not be overbearing or involve the appointment of an expensive corps of school

inspectors or indeed, lead to the establishment of a market of schools based on the public "naming and shaming" of institutions. The negative consequences of this have been observed in other countries. A number of other kinds of evaluation, however, are available. For example, one could be concerned with the cost-effectiveness of the system. Measures of cost-effectiveness draw not only on the actual costs of schooling but also on its value – which includes the academic and the social outcomes as well as all other non-financial benefits including the "opportunity costs" (what other use could have been made of the same resources). The point has been made in the latest Report from the Danish Economic Council (The Wise Men):

> It is thought-provoking that comparisons between different OECD countries show that costs per pupil in the Danish primary school are among the highest, while the pupils' performance is only average. This need not be seen as a problem if the primary school passes on valuable skills in a number of other fields emphasised in the objectives clause of the Primary School Education Act, such as personal and social skills. However, it is striking that no independent Danish framework for evaluating the fulfillment of the primary school objectives clause has been developed. A methodology for the evaluation of primary school education that can measure the various aspects should be established as soon as possible. [Det Økonomiske Rads (Danish Economic Council), 2003]

Research undertaken some 16 years ago provides a model of primary school evaluation involving both cognitive (reading, writing, speaking and mathematics) and non-cognitive (students' self-concepts and their attitudes to school) measures (Mortimore, *et al.*, 1988). Provided, therefore, that agreement can be reached on worthwhile aims and the means to measure them, the creation of such a methodology is possible.

> ***We recommend*** *that the Minister jointly with the municipalities and the Danish Union of Teachers initiates a development project to create a Danish framework for the evaluation of schooling.*

In our judgement, national evaluation would involve the Ministry in monitoring the municipalities' evaluation programmes rather than endeavouring to inspect their schools. The model would be premised on the view that if the local authorities' monitoring was competent, it would act to improve any sub-standard school. We suggest that where municipalities are too small to undertake this task, they pool resources and collaborate with neighbouring authorities.

> ***We recommend*** *that the Minister establishes within the Ministry a municipality education monitoring section.*

A further stage involving ministerial intervention might be needed (and we gather that the Minister already possesses the necessary reserve powers) if the municipalities were shown to fail to design effective methods of monitoring or create inadequate methods of supporting schools shown to be in need of help.

The EVA could also be involved in monitoring the progress of an anonymous sample of students and schools chosen to be representative of the country as a whole. In this case, the information gained would be used to inform the Ministry and municipalities of changes in overall national standards. Further investigations would then be needed to explore the reasons for any significant changes in standards. This is what the Assessment and Performance Unit of the United Kingdom Ministry of Education did in the 1980s (Foxman, 1991).

> ***We recommend*** *that the Minister commissions EVA to undertake regular annual surveys of different-aged students in chosen subjects in order to provide a national snapshot of performance.*

A different model of evaluation, drawn from Alberta, draws on the use of standardised testing in years 3 (literacy and numeracy) and years 6 and 9 (literacy, numeracy, science and social studies). The standardised tests are based on the outcomes expected from the use of a common curriculum. They are developed by teachers from across the system, field tested by other teachers and, following feedback, revised for formal use. All students (with very few exceptions) are required to take them. The tests are marked by the students' own teachers and this is generally regarded as valuable in-service experience.

The Alberta model thus provides teachers with a notion of what standards are possible independent of those of their own students and not necessarily limited by their experience. It also provides the provincial school authorities with an annual snapshot of student performance and school districts with an overview of the schools within their jurisdiction so that improvements can be expedited.

The discussion about the raising of standards leads inevitably to the question of whether the aim of the state is to create a football-type league table (as in the United Kingdom) in the hope that the ensuing competition will drive up standards or to try to raise the standard of as many schools as possible without creating a highly divisive structure.

Our proposals are for the latter, less-divisive approach. As we noted at several points in the Report, schools do not receive uniform intakes of students. We have observed the deleterious impact of the league tables on all those schools which receive disadvantaged intakes. In the United Kingdom

we have seen the negative effects of league tables on the confidence of school staff, the departure of ambitious teachers and the transfer of the children of ambitious parents to schools higher up the league table. We have seen how league tables can lead to a growth in the difference between those schools they label as the best and the worst. We have seen how some schools are pitched into a spiral of decline from which recovery is almost impossible. And we have seen how collaboration between schools is affected by a situation which turns collaborative, neighbouring schools into rivals.

In Finland there are no external tests in the years of basic education. Systematic national evaluations of samples of schools, however, are used to gather information on learning results in different subjects. Individual school data are not published, although each school in the sample receives a feedback report on their own students and national distributions are provided. National surveys are also used to highlight particular topics or themes though, as these also draw on samples, they cannot provide a reliable estimate for the school as a whole. Each participating school in the PISA sample is sent national and international averages from the PISA data to use as benchmarks in order to help teachers make their own comparisons.

We recommend that Denmark learns from these experiences and develops a positive approach. We believe publication of data about school performance is essential but that these data should be compiled in a way which reflects both their limitations and their complexity. Simple overall measures, which are bound to be misleading, should be avoided.

> ***We recommend**, therefore, that a policy that diagnostic tests and assessments should not be published in the form of simple league tables be adopted.*

Danish schools which appear to perform badly should be carefully investigated and, if found wanting, should be supported by recovery programmes undertaken by the local authorities.

> ***We recommend** that each municipality (or consortium of local authorities) establishes a School Improvement Team to provide immediate support for ailing schools.*

In this way, the school authorities will be raising the standard of the maximum number of schools. Furthermore they will be avoiding the disappointment of parents who, in a league table situation, would only be satisfied with the "top" school.

The establishment of monitoring and recovery programmes such as these could usefully complement more aggregate international assessments such as PISA.

We recommend *that Denmark continues to participate in such exercises such as PISA in order to maintain an external, international perspective.*

We understand that Denmark has not joined the group of countries working on a study for younger students, PIRLS[8]. The advantage of a national programme of monitoring is that the Danish scrutiny and scope for rapid interventions would not be limited to the timing of the international programme. Furthermore, such internal monitoring could address a broader spectrum of variables and apply more relevant criteria on a timely basis. It could provide a robust system for evaluating classroom and school performance, as well as enhancing the capacity of municipalities to act on feedback.

Increasing the challenge to students

We have described our identification of a common attitude which gives precedence to social or emotional development over intellectual progress. We believe that, within a secure relationship, teachers must learn to challenge students more. We recognise that this attitude will be difficult to change in the short term. We believe that change will only occur if the key players in the system can generate a debate within society about the need for a greater priority to be given to intellectual development. We know from experience in our own countries that an "unchallenging system" favours the children of socially and economically advantaged families, even though the help of the school is much more crucial for children from families at the other end of the spectrum – those facing disadvantage.

As we noted at the opening of this chapter, we believe all the partners in education will need to embrace a change of attitude. The traditional approaches are well entrenched and dovetail closely with existing practice. Change will require a different behaviour from people who are, by nature, caring individuals. It will be vital that the change is not characterised as an attack on the importance of social development or indeed on the happiness of children but, rather, as an extension of this caring approach to ensure that the intellectual aspect of children's developments is also covered. We are confident that a greater emphasis on intellectual development is bound to help the well-being of children.

The way this issue is dealt with in public discussions by the Ministry of Education, the local authorities and the school boards will be crucial. On the one hand, it is important that both teachers and parents do appreciate that the relationship between families' social and economic standing and success or otherwise in schooling is a powerful factor in *all* developed countries. Yet,

on the other hand, it would be unprofitable if such understanding resulted in any reduced expectations of what families, and the schools attended by their children, can achieve.

The issue needs sensitive handling for it would be quite wrong to suggest that the least economically successful parents are directly responsible through any personal shortcomings for the inequitable outcomes. The point is much more subtle: educational testing which seeks to *differentiate* between the performance of students shows that those with the most advantages in life – whether these be material factors (quality of housing, diet and childcare arrangements) or cultural factors (knowledge of how education systems work and of their potential benefits or number and range of books in the home) – tend to do better than those without such advantages.

Of course, as many autobiographies illustrate, and as we have noted in Chapter 5, many young people break this pattern and, no matter how disadvantaged their childhood, go on to achieve great success. And, as we stressed earlier, in some extreme cases, the disadvantage even seems to act as a spur to achievement. A strong relationship between disadvantaged backgrounds and poor educational performance, although a common pattern, is not inevitable. There is a substantial literature demonstrating the power of schools to make a difference in the lives of their students (Mortimore, 1998; Sammons, 1999). Furthermore, results from PISA suggest that some education systems are more effective than others in mitigating the influence of family background on educational performance.

Creating new kinds of tests

By continually emphasising the differential outcomes between students from *advantaged* and *disadvantaged* backgrounds, such results tend to reinforce the different expectations for the two groups and thus make this pattern even more likely. The very knowledge of such effects can themselves act as an inhibiter of change. One way of limiting this effect would be to switch *some* of the tests to more criterion-based measures. In this way, desired levels of knowledge or skills would be defined and the tests would be used to discriminate only between those who met the criteria and passed and those who failed to do so (like a driving test).

Differences between social groups would still be likely to be found in the *proportions* passing or failing the test but this would be apparent only at the macro level; it would be less likely than the current system to influence the perceptions of individuals. For a country that values equity as well as

quality, this change in assessment practice could lead, in time, to a change in people's attitudes.

We recommend *that the Minister commissions a development project to create criterion-based tests in a chosen subject.*

Additionally, of course, it will be important to use other tests to stretch the most advanced students. One example of tests which are designed to be challenging but not exclusive to the most able can be seen in an experimental programme of Graded Testing undertaken in London during the 1980s (Harrison, 1982). In such a system most children progress through the tests but at different speeds and with varying degrees of success, although they always move along the *same* path.

We recommend *that the Minister initiates an evaluation of different methods and materials concerned with assessment.*

Need for individual assignments

We also wish to comment on the issue of individual work. We drew attention earlier to the potential difficulties of homework and noted the PISA results which showed its negative potential. Yet we think it important to ensure that the opportunities for individual extended assignments that, in ideal circumstances, are provided by homework are not lost. Individual work of a sustained nature provides the student with an opportunity to test his or her own learning and the teacher with an opportunity for timely feedback.

Such individual work must be chosen with care so that students can see its relevance; pointless assignments can be counterproductive. But a school that has a systematic approach designed to meet the needs of children of varying competences and teachers who set and mark such assignments carefully can provide its students with a greatly enhanced opportunity to learn – whether the assignments are undertaken in school, at home, or within the after-school care arrangements.

We recommend*, therefore, that the Minister establishes a second Task Force to investigate the efficacy of the different modes of self-study employed within schools and in the school leisure time schemes (SFO).*

Strengthening school leadership

In the last chapter we mounted an argument for powerful school leaders. We see these as necessary for modern schools which, as we have noted, have a host of accountabilities and serve a variety of purposes. We expect schools of the future to become even more complex organisations, perhaps

employing quite different kinds of staff and undertaking broader functions concerned with child care. In at least some of the reference countries, school leadership is seen as a professional matter with its own skills and training routes, not as something that a teacher – even a talented and experienced teacher – could be expected to pick up as part of a normal teaching career.

We urge, therefore, that both leadership and management skills are recognised as being parts of the enhanced role of school leaders. We define leadership as the ability to create a vision, identify common goals, galvanise and inspire colleagues, represent the interests of the school locally and nationally, provide a positive model for more junior staff and instil within the school a culture of evaluation and continuous improvement.

In view of our comments on the need to create a culture of evaluation throughout the system, this part of the leadership role is extremely important. We are defining management skills as dealing with the distribution of resources in an efficient and fair manner, settling internal disputes, hiring and supervising staff and monitoring and evaluating the performance of the academic, administrative and premises-related staff and the school as a whole. The school leader must be the linchpin of all school improvement initiatives. We recognise that, in practice, these roles interact with each other but wish to make the point that school leaders need to succeed with both sets of roles.

*Accordingly**, we recommend** that municipalities (coordinated by the Local Authorities' Association) devise ways to enhance the status of school leaders.*

This means an increase in the difference between their pay and that of teachers. We wish to stress that, with these suggestions, we are not promoting an autocratic style of leadership; we have seen how ineffective such styles can be. Rather, the model of school leadership which we are proposing is reflective, supportive of colleagues and acts as a unifying force within the school and the community.

Given the nature of this role, we believe that high-level training should become a prior requirement for all *applicants* for school leadership appointments. We believe that candidates should only be eligible to apply for leadership posts when they are thus qualified. We suggest the training should be university-based and lead to a diploma or degree. We also suggest that it include a formal mentoring relationship with an existing leader from an educational or analogous field. In Finland, university-based courses have been designed for applicants for school leaders. These are not yet mandatory but are becoming increasingly popular. In England, national and regional leadership centres have been established and a national professional qualification has become mandatory from 1 April 2004.

***We recommend**, therefore, that municipalities make award-bearing leadership and management courses mandatory for applicants for school leadership posts. We also recommend that the period of mentoring continues until the end of the first year of appointment as a school leader.*

Discussion about the existence of a distinctive role for school leaders raises the question of whether allowances for posts which carry responsibility for particular aspects of leadership, as implemented in some municipalities (e.g. Aarhus), should be used more commonly. Such posts make leadership available at different levels of the school staff and also provide a route along which potential school leaders could gain valuable experience.

***We recommend** that those municipalities which currently do not do so consider the adoption of allowances for posts of responsibility.*

Enhancing pre-service teachers' training

In the light of the limited time available for us to focus on teacher education – and our awareness of Denmark's participation in an OECD review on attracting, developing and retaining effective teachers and the recently completed EVA evaluation, we hesitate to make many radical recommendations for change. However, we wish to put on record our doubts about whether the traditional Danish pattern of preparing generalist teachers, expected to teach across the curriculum, is adequate for the future. We are of the view that the recent explosion of knowledge – particularly in the sciences and in the adoption of information technology – requires specialised study at least at the level of a first degree and ideally at masters' level, as in Finland. We have noted that both the Teachers Training College Rectors and the Danish Teachers' Union have proposed an expansion in the length of training (and probation) from the current four years[9].

***We recommend** that consideration by the Minister be given to the sub-division, and possible extension, of the current teacher training curriculum into specialist courses.*

We are dubious about whether the same teacher can manage equally well the learning of seven- and sixteen-year-old students. We suggest that consideration be given to some division of the course. One method would be to teach a common core course but to provide specialist modules for those preparing to teach children of different ages:

- Early years for kindergarten and years one to three;

- Middle years for years four to six;
- Senior years for years seven to ten.

The early years module could prepare future teachers as reading and early numeracy specialists and enable them to study thoroughly the characteristics and needs of young children. It could also include adequate preparation for the teaching of bilingual and special-needs students in ordinary classes as well as introducing them to remedial techniques.

The middle years module could specialise in remedial help for those students still showing difficulties in reading and numeracy, possibly in conjunction with specialist training in *Reading Recovery* (which we noted earlier). Essentially, it would provide expertise in teaching a limited age group. Like the other module, it could also include adequate preparation for the teaching of bilingual and special needs students in ordinary classes.

The senior years module could focus on the teaching of subject knowledge up to the school leaving examinations level – especially providing expertise in mathematics and science. As with the other specialist modules it could also include preparation for the teaching of bilingual and special-needs students in ordinary classes and the full repertoire of remedial techniques.

> ***We recommend**, therefore, that consideration be given by the Minister to the sub-division of the current teacher training course into age-related components.*

There may well be better ways to sub-divide the course based on other criteria. The point we wish to make is that some such change would permit specialisation to occur and specific subject and age-related expertise to be acquired.

We regret the lack of daily contact between those in the process of becoming teachers and those involved in high-level research into education issues and problems. This is especially important in the light of our recommendations about monitoring and evaluation. We understand that Denmark is also involved in an OECD review of educational research and development.

> ***We recommend** that consideration be given by the Minister to the optimal way of linking teacher training, in-service work and educational research.*

We recognise that Denmark enjoys a long tradition of providing teacher training for the *Folkeskole* in teacher training colleges. We know that those

who have completed college courses are permitted to be called bachelors of education but we are unsure as to whether this qualification is accepted as being equal to a bachelors degree from a university. We do not know whether universities, for instance, accept bachelors of education as qualified to study for their masters degrees?

Teacher training colleges no longer exist in a number of countries. In Finland, where all teacher training takes place in universities, a joint project on teacher qualifications was undertaken in 2001 by two universities, the Ministry, the National Board of Education and Statistics Finland. As a result of its findings, resources for teacher education were increased (Luukainen, 2000). The high quality of the teaching profession in Finland is guaranteed by the education up to masters' level of all teachers. As a result, teaching enjoys high status. In a recent investigation by the leading Finnish newspaper, teaching was seen as the most popular choice of profession amongst young people leaving academic upper secondary school (Helsingin Sanomat, 2004).

Canada and the United Kingdom have also converted their teacher training colleges into university departments of education.

In the Canadian provinces the links with the schools have often been formalised through the use of a Memorandum of Understanding setting out the expected outcomes for qualified teacher status. In Alberta the recent Commission on Learning has recommended that such a committee be established to review and monitor the following issues (Alberta's Commission on Learning, 2003, p. 117):

- Teacher supply;
- Changing expectations of teachers;
- Experiences of beginning teachers;
- Best practice in the preparation of teachers;
- Ongoing evaluation of teacher preparation programmes.

Extending in-service training

We are of the view that a nation-wide programme of in-service training for all teachers would provide a powerful stimulus to the reforms we have been suggesting. Such a programme could provide the opportunity for teachers to update their subject knowledge, increase their own pedagogical

skills, learn about the latest research into school improvement or a chosen area of expertise (such as evaluation) and re-charge their energy and commitment.

Attendance at in-service programmes over several years could become the foundation of a masters' degree (supplemented if necessary by part-time study) so that each teacher could have their progress recognised with a further qualification. It is, of course, important that the Danish Teachers' Union be involved in the planning of such courses. In Alberta, for example, the professional organisation of teachers plays a crucial role in servicing its own members. In Finland every teacher has to participate annually in at least three days training (organised in various ways by the municipalities).

We recommend *that the municipalities (coordinated by the Local Authorities' Association) in association with the Danish Union of Teachers establish a mandatory programme of targeted annual in-service training for every Folkeskole teacher.*

Need to make the teachers' contract more flexible

We have already drawn attention to the lack of clarity about the details of the contract which we encountered in schools. If the contract is to be treated as the final arbiter of what should and should not be done in schools then clarity is essential.

We wish to question, however, whether this reliance on legalistic interpretations of a contract is an appropriate way to conduct the work of professionals such as teachers. We believe that less reliance should be placed on this document. We see the contract as something to be used as a last resort, in the case where a teacher is being bullied or mistreated or is failing or misbehaving. It is far better, in our view, that teachers develop a professional code which is less restrictive. In particular, it should allow them to devote their time and energy to the needs of their students without fear of violating a condition of service.

This takes us to the issue of the amount of time currently that is spent by teachers in direct contact with students. As we reported in the last chapter this is, on average, 34% as opposed to the 64% which could be required. In comparison with most countries this is a very low figure. Whilst we accept that face-to-face tuition is only one facet of the role of a teacher, we believe it to be the principal one. Furthermore we were informed that some rural municipalities struggle to provide the minimum number of lessons mandated by Parliament. In such extreme circumstances, a more flexible approach to the way teachers' time is used would surely bring considerable benefits to the students and the system as a whole.

This restrictive contract is one of the factors which makes the Danish education system so expensive to fund and inhibits the flexible use of resources. We believe that the balance between teachers' duties has become distorted and needs to be recalibrated so as to provide greater flexibility.

We recommend *that the Local Authorities' Association and the Danish Union of Teachers ensure that the teachers' contract is made more flexible.*

We are impressed at how well the DLF has negotiated its conditions of service over recent years but advise strongly that the contract is renegotiated in a way which will provide much greater flexibility within the system. With greater flexibility we trust that, for example, the needs of the bilingual students we described earlier and other activities can be programmed out of school hours. We also suggest that the amount of time devoted to meetings and lesson preparation be reduced and the time saved be reapportioned to in-service training.

We recommend *that any renegotiated contract should include a substantial component of time dedicated to mandatory in-service training.*

The maximum amount of class hours allowed by the *Folkeskole* Act for the pre-school class and for the first to third year levels is six hours per day. But in a number of schools visited, the actual time in which students were being taught – rather than engaging in other kinds of school activities – fell far short of this figure.

We recommend*, therefore, that the municipalities monitor the use of time within the Folkeskole so that the opportunities for learning are maximised.*

Relieving school staff of non-academic burdens

We discussed in the last chapter the claims of an increase in the demands currently being made on schools. Family life in Denmark, as elsewhere, is changing. A greater proportion of families in which both parents are in full-time work now exists than in previous times (75% of women are in paid employment). Divorce rates have increased and more students are living in homes with only one parent or dividing the week between parents who live separately. These changes create more tasks for schools and make the usual parent/school relationship more complex. We cannot identify an easy solution to the problems caused by the tendency to pass family functions on to schools.

It is possible to argue that families *ought* to take back responsibility for all aspects of the health and well-being of their children. But with such a large proportion of both parents working outside the home such action is unlikely and could not be enforced. Were schools to stop dealing with health education, relationships, sex education, healthy eating and the numerous other topics that can absorb large amounts of time and energy, it is difficult to see which other agency would assume such responsibilities. If the result was that young people were deprived of information and guidance and the opportunity to discuss issues of great importance to them, then the outcome would be bad both for them and for society. Yet, as one respondent informed us:

> "Some primary teachers resign from their jobs when they are confronted with the huge task of socialising and disciplining the children. (School Leader of Gymnasium, 2003)"

The same respondent went on to argue that:

> "Parents are extremely critical of schools today." In his view there are some parents who believe that "they pay their taxes and expect the school to educate (raise) their children."

This parental attitude is not peculiar to Denmark. It is commonly found in many countries where the idea of education as a public good is no longer deemed sufficient to justify taxation. Thankfully, it is usually a minority voice and the majority of parents appreciate that both parents and teachers share in the upbringing of children and that the more that they see eye to eye, the more benefit there is to the child and, ultimately, to society. Clearly the better the education of the teacher, the better he or she can handle such challenges.

One possible way to reduce pressure on teachers is for schools to draw more on the existing services of the municipal school doctor and visiting nurse. If this could be done, it could free the time of teachers so that they could concentrate more on learning and teaching issues – tasks for which they have been primarily trained. Another advantage would be that the medically trained staff would be better placed to liaise with other family social workers or related staff in the municipality. They would also be better placed than many teachers to deal with aspects of sex and health education and to advise young people in difficulties.

The more frequently that these medical staff were involved, the more they would build up their knowledge of families. They would also be in a stronger professional position to advise parents if the school staff believed that a student fell into the "pampered child" category. One disadvantage of the greater use of medical staff in schools might be that teachers would feel

cut off from students' problems. Knowing their students as well as many of them do, they might feel resentful that other professionals were usurping their traditional role. This problem should fade away, however, as the new system was established. The increased time available for intellectual concerns and the fewer telephone calls from parents to teachers' homes should provide some compensation.

There is, however, a question of whether these doctors and nurses would have the time to give to all the schools which might require their services. Furthermore, many of the problems may be more social than health related and better dealt with by non-medical staff.

Another option would be to place certain municipal agencies concerned with children's development inside the school premises, as a way of permitting better linkage of education and non-education services, while reducing the risk of what is sometimes termed "mission creep" in education. In Finland, when local authorities are formulating their new curricula for years 1 to 9 they are bound to do so in collaboration with local social and health authorities. Furthermore, Finnish municipalities will be able, from August 2004, to claim a state subsidy if they arrange morning or afternoon care for the youngest children who have been transferred into special-education programmes. It is also the practice to provide a free hot meal to students in Finland – a practice seen to help in the area of student behaviour.

In the Alberta system, a government-funded service, the "Student Health Initiative Partnership", ensures that professionally trained social and health care workers provide a comprehensive service for children. Teachers and school administrators maintain a role in the planning and delivery of the service but do not have to undertake roles for which they have not been trained.

The practices of other countries may or may not be appropriate for Danish schools. But we remain convinced that some action is required. Either much better use of the existing system or an innovative approach is needed.

> ***We recommend**, therefore, that the Local Authorities' Association establishes its own task force to consider the optimal way to provide non-academic support for students of the Folkeskole.*

Improving behaviour

The other pressure we identified stems from the incidence of unacceptable classroom behaviour by students. As we noted earlier, the lack of objective data makes this a difficult problem to grapple with: estimates of

incidences vary; criteria of acceptability remain individual; and there is a tradition that prevents teachers from sharing their problems for fear of being thought ineffective. Furthermore if, as PISA data suggest, school leaders in Denmark are indeed more tolerant of inappropriate behaviour than their peers in other countries, teachers who endeavour to maintain good behaviour amongst their students may feel unsupported by their leaders.

We recommend *that the School Leaders' Associations undertake joint research to explore the different perceptions of classroom behaviour.*

We believe the role of the school leader is crucial to resolving such a problem. We have already made recommendations about the need for training in this and other aspects of school leadership and management.

Improving communication and collaboration

As noted earlier, we were surprised by the problems of effective communication which were perceived even by those working in different roles with the *same* children – teachers and pedagogues. In our experience, the communication weak spots are often clustered around system transitions such as the change from day care to kindergarten or from kindergarten to year 1. In this case, the communication problems we were told about occurred in the normal pattern of events between different professional groups.

Of course, as we have noted, we recognise the need for confidentiality and for data protection in the sharing of personal information. But we feel that these considerations should not apply to the majority of day-to-day instances involving discussion between two professionals about a student and his or her family.

We accept that it is difficult in any organisation to *ensure* that people communicate with each other. We know from our experience, however, that such communication can be fostered by the removal of any artificial barriers that have inadvertently been created.

We recommend *that the Local Authorities' Association reviews the perceived barriers between teachers and pedagogues.*

The under-use of educational premises we observed is wasteful of resources and misses the opportunity for enhanced collaboration between the adults often involved with different aspects of the same children. We were impressed by the benefits for the young people in the examples we witnessed of the shared use of premises by schools and after-school care.

***We recommend**, therefore, that the Local Authorities' Association reviews the potential opportunities for more flexible use of school space including, where appropriate, more shared usage.*

Strengthening training for teachers of students with moderate special needs

Our conclusion to the discussion of this issue in the previous chapter was that a re-examination of some aspects of the way that students with moderate special needs are currently dealt with would be worthwhile. The overall special-needs system, catering as it does to a small proportion of children with severe disabilities and a much larger proportion with moderate special needs, appears to be satisfactory in that it caters to the full range of needs. It also allows flexibility to suit individual requirements.

School leaders have considerable scope to offer special assistance or to increase or decrease the school hours for students. Psychologists are available for detailed assessments of needs. Municipalities have scope to offer individual or group provision. Parents have the right to be consulted and are kept informed of all decisions. Their wishes "shall be accorded considerable weight as regards the detailed organisation of the special education" (Danish Ministry of Education, 2000, Chapter 2).

We have two main concerns. First, we have the future provision of skilled specialist teachers. We have been informed that the existing pool of expertise is disappearing and is unlikely to be replaced due to the limited time available for special needs in the pre-service training. This is also becoming a global problem. In Alberta, for instance, the recent Commission on Learning reported that it "heard over and over again concerns about the need for better preparation for teachers in integrating special needs children while, at the same time, maintaining a sound program for the other children in the class", *(*Alberta's Commission on Learning, 2003, p. 117).

Our second concern is the apparent absence of systematic training in reading and numeracy for children with learning problems. The *Reading Recovery Programme* offers one way forward, and is highly cost effective in the long-run. Also needed, however, is some form of specific training in numeracy which does more than simply repeat the learning methods which have already proved ineffectual with students with learning problems.

***We recommend** that Local Authorities' Association reviews the programme of in-service training in order to ensure that sufficient teachers take additional training to equip them to deal with students with moderate special needs*.

Enhancing provision for bilingual students

We have already drawn attention to the need for bilingual students to be given extra help. As we noted earlier, we feel strongly that the current system of removing them from the school curriculum in order to provide extra help in Danish is likely to be counterproductive.

A recent article on extra-curricular school activities (ESAs) reported that school-based activities had been found to be more beneficial than out-of-school activities. It also stated that disadvantaged students benefited as much, or more than, their more advantaged peers. The article does not address the issue of bilingual students directly but it would seem likely that the impact of ESAs on such students would be similarly positive. This would point to the scope for expansion of after-school programmes for bilingual and other students (Marsh, H. and K. Sabina, 2002).

In connection with the potential overlap between bilingual students and those with special educational needs, as we noted earlier, we have been given conflicting messages about whether or not this is a problem.

We recommend *that the Minister initiates a research project to investigate the distribution of bilingual students in special education and to make recommendations in the light of its findings.*

We recommend *that the Local Authorities' Association creates a mechanism to disseminate the methods of those municipalities with acknowledged expertise in the teaching of bilingual students.*

If this were done, other municipalities – even those dealing with small numbers of such students – could benefit from their experience.

We also recommend *that the Minister requests a re-examination of the available evidence concerning the use of mother tongue languages by teachers engaged in the teaching of Danish to bilingual students.*

Conclusion

This final chapter has endeavoured to formulate a set of recommendations on how the weaknesses of the Danish system could be remedied. We concluded Chapter 7, which described these weaknesses, with the observation that – despite its considerable strengths – the Danish education service can still be characterised as somewhat complacent. The dilemma facing any team of reviewers is how best to dispel such complacency whilst not sapping the morale of those who work within the system and without reducing the confidence of parents and children in the school system.

The solutions that we are proposing seek to build on the good practice which we encountered in our visits and meetings in Denmark and on our experience of education systems in other countries. We believe that if our proposals are adopted they will provide educators in Denmark with the opportunity to regain the quality which the system undoubtedly once had. This could make the Danish *Folkeskole* system a world leader and provide for the nation an education experience of outstanding quality yet one able to achieve equity amongst its future citizens.

A common reaction to radical ideas is to support them in principle but reject them on grounds of costs. The Danish reaction could be different. Because of its tradition of generous funding and the nature of the teachers' conditions of service, Denmark is in a unique position to use the *current* level of spending to fund a radical programme of in-service training.

Such an in-service project could operate in some of the time currently devoted to lesson preparation and meetings. This time should be re-allocated to in-service education. This change would require the enthusiastic cooperation of the DLF and the KL as well as the collective imagination and professional commitment of the teaching profession. We believe that the potential benefit of such a change for the teachers themselves, their students and the country as a whole is immense.

We acknowledge that for those working within the Danish system to accept our recommendations may entail some sacrifices but we are convinced that there would also be considerable benefits. Acceptance will require teachers, and all those working in schools, to embrace challenging in-service training. The personal pay-off will be that staff will be better qualified for their work and, hopefully, will gain greater satisfaction from it.

Some of our recommendations may limit the autonomy of municipalities but they would also locate the municipalities at the heart of the improvement process. The recommendations would necessitate extra duties and functions for the Ministry. Many of these, however, involve duties and functions that are increasingly being adopted by ministries throughout the world.

More widely, our recommendations will probably create a few turbulent years for the whole education system. We end with a pertinent observation from the Canadian educator Michael Fullan.

> Successful innovations and reforms are usually clear after they work, not in advance. (Fullan, 1991, p. xi)

In our experience, most changes produce mixed results. Expectations are often unrealistic, practical difficulties exceed predictions and people are loath to depart from the security of familiar roles. As a result there are bound to be false starts, unsuccessful operations and unexpected or

disappointing outcomes. But, if the majority of those involved grasp this opportunity with enthusiasm, pluck up courage to take the plunge and prove willing to modify their actions in the light of experience of working in different circumstances; we are certain that the benefits will exceed even our high hopes. We believe that they will lead to many extra unplanned improvements and – the biggest goal of all enhanced student achievements. We are convinced that such benefits would amply repay the effort. If we are correct, then Denmark will have enhanced its education system, reinvigorated its teaching profession and will be in a position to offer its future citizens a world-class educational experience.

NOTES

[8] Progress in International Reading Literacy Study (PIRLS), 2003-2008. This is a five-year cycle of assessment being undertaken by IEA that measures trends in children's reading literacy achievement and policy and practices related to literacy.

[9] This is less than Canada or Finland (where those who are training to teach children of lower secondary years study at masters' degree level for over five years) but similar to Norway, Sweden and the United Kingdom.

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Annex 1 Terms of Reference for the Review[10]

Education has long been considered an integral part of the foundation of Danish society. Because of the comparative scarcity of natural resources and heavy reliance on human resources, education has also been critical to the vitality, health, and long-term dynamism of the Danish economy.

Denmark has never taken its system for granted and has engaged, from time to time, in self-examination and reform. The economic, cultural, and social dimensions of globalisation and the emergence of the knowledge society intensify the pressure for such action. Furthermore, the increasing availability of internationally comparable data has provided additional impetus for questioning the quality and equity of schooling outcomes.

Recent results from PISA provide evidence that the primary and lower secondary school is currently falling short of the expectations of Danish society. The OECD review is being carried out to place these results in an international perspective. Focusing principally on primary and lower secondary education, it is intended to provide insights, informed by experience in other countries, into possible explanations for the observed outcomes; and to suggest remedies that reflect international good practice.

The review addresses the following questions:

- Viewed from an international perspective, what are the strengths and weaknesses of the quality and equity of the outcomes of lower secondary education in Denmark?

- Which are the most important weaknesses requiring urgent attention?

- What appear to be the principal causes of these shortcomings? What are the most plausible strategies to overcome them in a manner that is consistent with the culture, values, and traditions of Denmark?

- Which initiatives might be pursued by the state, municipalities and individuals in implementing and facilitating such strategies?

NOTES

10.The terms of reference were negotiated and agreed by the Danish authorities and the OECD after the Background Report was completed.

Annex 2 Comparative Statistics (Denmark and Other OECD Countries)

	Units	Reference period[1]	Denmark	Canada	Finland	Norway	Sweden	United Kingdom	Euro area
Population									
Total	Thousands	2000	**5340**	30750	5181	4491	8872	59501 (99)	300595 (98)
Inhabitants per sq. km	Number	2000	**124**	3	15	14	20	243 (99)	120 (98)
Net average annual increase over previous 10 years	%	2000	**0.4**	1.0	0.4	0.6	0.4	0.3 (99)	0.9 (98)
Employment									
Total civilian employment (TCE)[2]	Thousands	2000	**2692**	14910	2326	2233	4159	27677	119351 (99)
of which:									
Agriculture	% of TCE	2000	**3.3**	3.3	6.1	4.1	2.4	1.5	4.7 (99)
Industry	% of TCE	2000	**26.4**	22.6	27.6	21.9	24.6	25.4	30.1 (99)
Services	% of TCE	2000	**69.9**	74.1	66.0	71.1	72.9	72.8	64.9 (99)
Gross domestic product (GDP)									
At current prices and current exchange rates	Bill. USD	2000	**160.4**	700.6	120.9	161.8	229.0	1429.7	6036.1
Per capita	USD	2000	**30039**	22768	23359	36021	25818	23925	19812
At current prices using current PPPs[3]	Bill. USD	2000	**155.1**	861.5	130.3	135.5	220.4	1460.3	7395.5
Per capita	USD	2000	**29061**	27998	25175	30166	24843	24437	24273
Average annual volume growth over previous 5 years	%	2000	**2.7**	3.9	5.1	3.1	3.0	2.8	2.5
Indicators of living standards									
Private consumption per capita using current PPPs[3]	USD	2000	**13512**	15254	11897	12248	12073	15382	13676
Passenger cars, per 1000 inhabitants	Number	1999	**343** (98)	450 (97)	403	406	439	385 (97)	437 (97)
Internet subscribers, per 100 inhabitants	Number	2000	**21.3**	20.2	10.9	15.6	23.0	12.4	7.2 [10] (98)
Television sets, per 1000 inhabitants	Number	1998	**591** (97)	717 (97)	623 (97)	461 (97)	378	517 (97)	519 (97)
Doctors, per 1000 inhabitants	Number	1999	**3.4**	2.1	3.1	2.8	3.1	1.8	…
Infant mortality per 1000 live births	Number	1999	**4.2**	5.3 (98)	3.6	3.9	3.4	5.8	4.7 (00)

	Units	Reference period[1]	**Denmark**	**Canada**	**Finland**	**Norway**	**Sweden**	**United Kingdom**	**Euro area**
Upper secondary education									
Upper secondary graduation rates		2001	**100**	N/A	85	97.0	72	N/A	
% of 25-64 year olds who completed upper secondary education	%	2001	**80**	83	75	86.0	82	64	
Tertiary Education									
Percentage of 25-64 year olds who have attained Tertiary Education									
Tertiary type B education	%	2001	**5**	22	17	3.0	15	8	
Tertiary type A and advanced research programmes	%		**23**	21	21	28.0	18	19	
Mean Performance on PISA - 15 year olds (country mean=500)									
Performance of 15-year-olds on the PISA reading literacy scale	Mean score	2000	**497**	534	546	505.0	516	523	
Performance of 15-year-olds on the PISA mathematical literacy scale	Mean score	2000	**514**	533	536	499.0	510	529	
Performance of 15-year-olds on the PISA scientific literacy scale	Mean score	2000	**481**	529	538	500.0	512	532	
Education expenditure (in equivalent US dollars)									
Expenditure on educational institutions per student - Secondary	USD		**8113**	N/A	6537	9040.0	6482	5933	
Expenditure on educational institutions per student - Tertiary	USD		**14280**	N/A	10981	13189.0	15188	10753	
Public expenditure on education as a percentage of GDP		2000							
Primary, secondary and post-secondary non-tertiary education	%		**4.3**	3.4	3.7	4.6	4.3	3.9	
Tertiary Education	%		**1.8**	2.5	1.7	1.3	1.7	1.1	

NOTES

1. Unless otherwise stated

2. According to the definitions used in OECD Labour Force Statistics

3. PPPs = Purchasing Power Parities

Source: OECD, 2003a; OECD 2003b

Annex 3 The *Folkeskole*

The *Folkeskole* is the Danish municipal primary and lower secondary school

The *Folkeskole* was founded in 1814, and all children were given the right to seven years of education. The subjects then were religion, reading, writing and arithmetic. Since that time, only six major changes have been made in the Education Act, *i.e.* in 1903, 1937, 1958, 1975, 1993, and in 2003. The changes in the Education Act passed the Parliament in April 2003. In the coming years the changes will be introduced to municipalities and schools. According to the Danish tradition a development program for schools supports the changes in the legislation.

Education is compulsory in Denmark for everyone between the ages of 7 and 16. Whether education is received in the publicly provided municipal school, in a private school, or at home is a matter of choice, as long as standards are met. It is education itself that is compulsory, not school.

The aims of the *Folkeskole*

1. The *Folkeskole* shall – in cooperation with the parents – further the pupils' acquisition of knowledge, skills, working methods and ways of expressing themselves and thus contribute to the all-round personal development of the individual pupil.

2. The *Folkeskole* shall endeavour to create such opportunities for experience, industry and absorption that the pupils develop awareness, imagination and an urge to learn, so that they acquire confidence in their own possibilities and a background for forming independent judgements and for taking personal action.

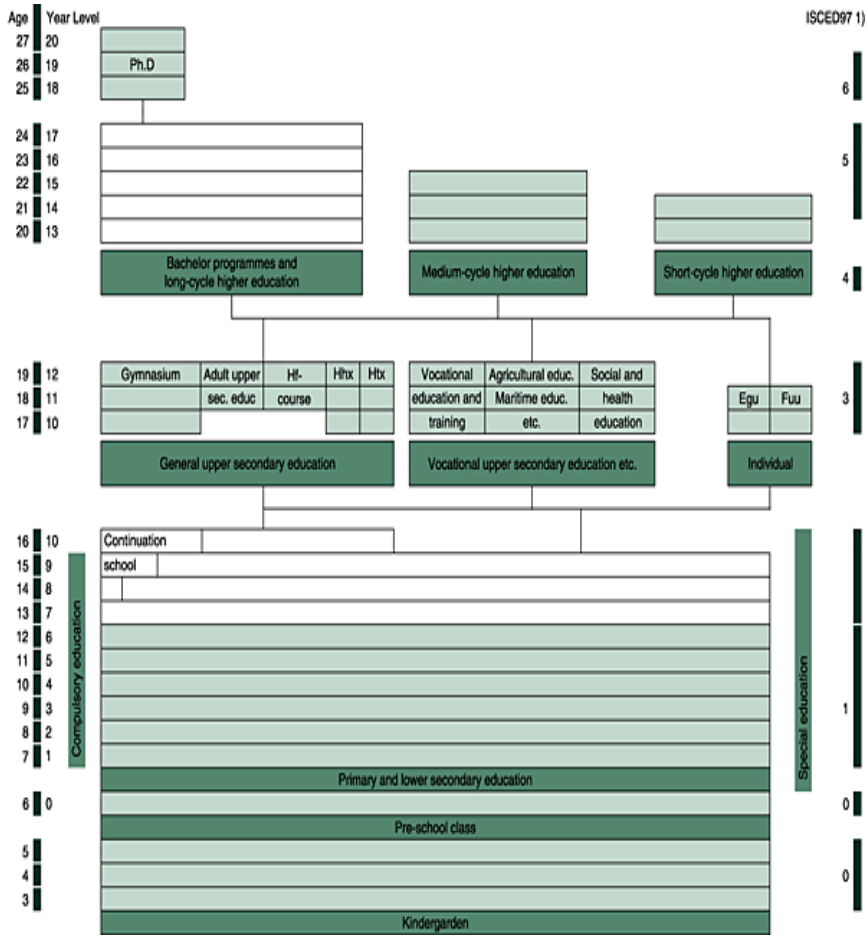
3. The *Folkeskole* shall familiarise the pupils with Danish culture and contribute to their understanding of other cultures and of mans' interaction with nature. The school shall prepare the pupils for active participation, joint responsibility and rights and duties in a society based on freedom and democracy. The teaching of the school and its daily life must therefore build on intellectual freedom, equality and democracy.

The *Folkeskole* in figures

There are:

- 271 municipalities (02/03)
- 1 666 municipal schools (01/02)
- 575 492 pupils (01/02)
- 28 642 classes (01/02)
- Average number of pupils per class is 19.4 (01/02)
- Teacher/pupil ratio is 1:10.7 (00/01)
- 98% of all children attend the pre-school class provision
- 48 284 teachers, of which 64% are women (00/01)
- 9 171 pupils receive extensive special educational assistance (00/01)
- 53 446 bilingual pupils (01/02) – 20% with Turkish background
- Net operational expenditure per pupil is DKK 47 851 (00/01)

Figure A3.1 Diagram of the Danish Mainstream - Education System 2000



Note: The age is the theoretical minimum age for the formal courses of education, *i.e.* excluding adult education. After basic school, the pupils are often older due to sabbaticals, waiting time, change of study programme, etc. The arrows illustrate general connections between basic school, upper secondary and higher education but not all actual transitions.

International standard classification of education

The common Folkeskole – the local Folkeskole

The Danish *Folkeskole* is centrally regulated by the Act on the *Folkeskole*, which sets the framework for the activities of the school. This means that all municipal schools have common aims, common provisions for the subjects that are to be taught at the different year levels, common

provisions for the central knowledge and proficiency areas of the subjects and common provisions for the organisation of the school system. But it is the responsibility of the individual municipality to decide how the schools of the municipality are to function in practice within the framework of the Act.

The Danish *Folkeskole* is thus subject to common guidelines, and children who change schools will find a familiar school form at the new school. On the other hand, it is possible to give the individual school a local stamp. All concrete decisions regarding the individual school are taken in the municipality.

Table A3.1 The Subjects Taught

Plan for distribution of lessons *Number of lessons (60 minutes) per year*		*Class:*									Minimum Recommended	
		Kg.kl.	1.	2.	3.	4.	5.	6.	7.	8.	9.	
											1. - 9. Kl.	1. - 9. Kl.
Humanistic	Minimum number lessons				**1000**			**955**			**1320**	
subjects	Danish		300	270	240	180	180	180	180	180	180	1890
	English				60	60	90	90	90	90	90	570
Recommended	German /French								90	120	120	330
Lessons pr year	History				30	30	30	60	60	60	30	300
	Religion		60	30	30	30	30	60		30	30	300
	Civics									60	60	120
Science	Minimum number lessons				**560**			**515**			**790**	
Subjects	Mathematics		150	150	150	120	120	120	120	120	120	1170
	Science		30	30	60	60	60	60				300
Recommended	Geography								60	60		120
Lessons pr year	Biology								60	60	30	150
	Physics /Chemistry								60	60	90	210
Practical and expressive	Minimum number lessons				**430**			**690**			**325**	
Subjects	PE		30	60	60	90	90	90	60	60	60	600
	Music		30	60	60	60	30	30				270
	Art		30	60	60	60	30					240
Recommended	Handicraft					60	120	120	90			
Lessons pr year	Woodwork					60	120	120	90			390
	Home economics					60	120	120	90			
Subjects to be elected										60	60	120
Klassens tid	Minimum number lessons				**70**			**70**			**85**	
Klassens tid			30	22,5	22,5	22,5		30	30	30	30	240
Minimum number lessons					**2060**			**2230**			**2520**	**6810**
Basis numbers of lessons pr. year			600	600	660	660	660	660	660	660	660	
Kindergarten Minimum number lessons		**600**										
10. Form Minimum number lessons		**840**										
											Recommended lessons	7320
Minimum number lessons Danish (1. - 3. Kl.)					**810**							
Minimum number lessons Mathematics (1. - 3. Kl.)					**450**							

The curriculum

The central administration of the *Folkeskole* is in the hands of a department in the Ministry of Education. The Danish Parliament takes the decisions governing the overall aims of the education, and the Minister of Education sets the targets for each subject. Furthermore, the Minister of Education – as a novelty (2003) – establishes compulsory objectives for

specific forms (threshold objectives). The threshold objectives reflect the optional number of lessons, the structure of the subjects and progression.

The final objectives and the threshold objectives indicate the common objectives set out by the Ministry for what the instruction is to lead to *i.e.* what knowledge and proficiencies the pupils are to have acquired of the subject and the topic at the end of the education and at the end of a particular threshold.

The final objectives are the long-term objectives, which are to function as landmarks during the entire educational programme. The threshold objectives are the short-term objectives, which are used in connection with the planning and evaluation of the teaching, as a dialogue tool and as areas in connection with the assessment of the pupil's benefit from the instruction. The Ministry of Education shall issue optional curriculum guidelines setting out the content of the education.

As a new element in the educational hierarchy (2003), the local authority is to draft standards for the progression and the continuity of teaching towards the threshold and final objectives. The standards are to be used as a tool for the teachers in their planning of the instruction, and in the co-operation on subjects and cross-curricular programmes with a view to supporting the individual pupil's development and needs. The local authority can approve standards subject to recommendation by the school board. The Minister of Education shall issue optional standards.

But the municipalities and schools decide how to reach these targets. And the individual teacher must select the proper teaching methods and the books and materials amongst those materials which are approved by the school board.

No school failure

The Danish *Folkeskole* is not an examination-oriented school. The main rule is therefore that a pupil attends a class with pupils of the same age. School failure is an almost non-existing phenomenon in the Danish *Folkeskole*. In its section 12, the Act on the *Folkeskole* makes it possible – with the consent of the child's parents – to repeat a school year, *i.e.* if the pupil has been away for a long period of time or other reasons make this necessary. Children have the choice to attend a pre-school class. If a child is not found ready after this year to enter school, he or she may stay for another year in the pre-school class.

The class teacher system

The class teacher concept has its roots far back in the Danish school tradition. The class teacher is the teacher among the teachers of a class who has the main responsibility when it comes to monitoring and supporting the subject-specific and social development of the pupils. The class teacher is to ensure coherence and progression in the entire teaching of the class. The class teacher has a central role when it comes to the pupils and the school-home cooperation. The tasks of the class teacher are mentioned in the Act on the *Folkeskole*. The class teacher has a coordinating role when it comes to the organisation of teaching, the organisation of interdisciplinary teaching and the obligatory topics. The class teacher plans and organises the teaching in cooperation with the other teachers of the class and is a key person in connection with the requirement about differentiated teaching and the evaluation of the pupils' benefit from the teaching.

Challenges for the individual, differentiated teaching, formation of team

The *Folkeskole* is an undivided (comprehensive) school, where the formation of classes takes its point of departure in the age of the pupil and not in the subject-specific proficiency of the pupil. In order to give all pupils in the *Folkeskole* the best possibilities to have an all-round development and learn as much as possible, the *Folkeskole* builds on the principle of differentiated teaching. The teaching is organised in such a way that it both strengthens and develops the individual pupil's interests, qualifications and needs and so that it contains common experiences and situations providing them with experience which prepares them for cooperation on the performance of tasks. The Act on the *Folkeskole* provides a further possibility to sustain the principle that all pupils should be given adequate challenges, as teaching can take place in a team for part of the time in order to make it possible to take the point of departure in the individual pupil's prerequisites and current level of development. Recent changes in the legislation (2003) have strengthened possibilities for organising the learning in teams of different sizes and according to learning abilities and styles.

Formative evaluation

In the first to seventh years, information is given either in writing or more usually verbally in the form of meetings in which all three parties – pupil, parents and class teacher – take part. In the eight to tenth years, the information system is extended to include a written report at least twice a year giving the pupil's attainment in academic achievement and in

application. This only applies to the leaving examination subjects, where pupils will be marked according to a 13-point marking scale.

In addition to this, a number of other meetings take place throughout the primary and lower secondary span of both a more social and a more progress-related nature.

School leaving examinations

Examinations are offered at two levels, the Leaving Examination after the ninth year and the Leaving Examination after the tenth year. Standard rules for all examinations ensure uniformity throughout the country. For the same reason, the papers for the written examinations are set and marked centrally. Examinations are not compulsory. The pupil is free to decide whether or not to sit for them, after consultations with the school – in practice, his or her own teachers – and the parents. Each examination subject is assessed on its own merit; results cannot be summed up to give an average mark.

Other forms of assessment

At the ninth year level, a mandatory project assignment gives pupils the opportunity to complete and present an interdisciplinary project of which the main content must be taken from history and civics. The project assignment is assessed in two ways: according to a 13-point marking scale and a written statement. The assessment of the project assignment can be indicated in the leaving certificate according to the student's wish.

Special needs education

Special education can be organised in different ways. In most cases, the pupil remains in a mainstream school class and receives special education in one or more subjects as a supplement to the general teaching. A pupil may receive special education that substitutes the pupils' participation in the normal education in one or more subjects. A pupil may alternatively be taught in a special class either within a mainstream school or within a special school. And finally a combination is possible in which the pupil is a member of either a mainstream school class or a special class, but receives education in both types of classes. Special classes exist for pupils with intellectual disabilities, dyslexia, visual handicap, hearing problems, and for pupils with a physical handicap.

Co-operation between school and home

It is the aim of the Danish *Folkeskole* that it is to carry out its activities in co-operation with the parents. The Act on the *Folkeskole* is very clear on this point requiring that parents and school co-operate, and that pupils and parents are regularly informed about the school's opinion on how each pupil profits from his or her schooling. "Regularly" here means at least twice a year and refers explicitly to information about the pupil's personal and social development as well as his or her academic attainments. A school board is mandated at each independent school. Five to seven parents are elected by and from among persons who have custody of children enrolled in the school. The school board conducts its activities within the target and framework laid down by the municipal council and supervises the activities of the school.

The optional pre-school class

The *Folkeskole* must comprise a one-year pre-school class. At the request of its parents, a child must be admitted to a pre-school class in the calendar year of his or her sixth birthday or – under certain circumstances – one year before or after the sixth birthday. The pre-school classes have, since 2003, centrally formulated aims and binding curriculum guidelines.

School-based leisure time facilities

According to the Act of the *Folkeskole*, the municipalities have the possibility to decide whether leisure-time facilities should be established at the municipal schools and to decide how the school-based leisure time facility should operate in their area. A leisure time manager, who reports to the head of the school, carries out the daily management. The head has the overall educational and administrative responsibility for the form and content of the school-based leisure time facility.

Educational and vocational guidance

It is the aim of the topic of educational and vocational guidance and labour market orientation that the individual pupil acquires broad knowledge of educational and vocational possibilities and realises the value of completing a course of education. Through the teaching, the pupils should be given the possibility to prepare their own choice of education and vocation and understand the choice as a number of decisions which have to be taken on the basis of ones' own prerequisites, needs, attitudes and social possibilities. Educational and vocational guidance and labour market orientation is an obligatory topic throughout the entire period of schooling. Individual guidance from the sixth year with the point of departure in the

pupils' educational log is to contribute to giving the pupil a realisation of his or her own expectations and prerequisites so that he or she becomes able to draw up a personal education plan at the end of the ninth year.

The tenth year

The tenth year constitutes an offer to that group of pupils who, on completion of the ninth year, has not yet come to a decision on their choice of education. This school year is thus to be seen as a supplement at the time of transition from basic school to upper secondary education, and the offer is in particular meant for pupils who need to strengthen their subject-specific or personal competencies in order to acquire more confidence with regard to their choice and ability to complete a course of education at the upper secondary level. The school year is made up of obligatory lessons in Danish, mathematics and English corresponding to half of the teaching time and a number of other subjects which the pupil chooses on the basis of his or her education plan. The pupil is furthermore offered to take part in bridge building to upper secondary education. The teaching takes place at the individual *Folkeskole* or in special tenth year centres which bring together the tenth years of a local area.

School libraries

In every *Folkeskole*, a school library is established as a pedagogic service centre. The school library is part of the school's activities and it collaborates with the public library. The school library places teaching materials at the disposal of teachers and the pupils for their leisure-time reading.

The school librarians and other staff, *e.g.* persons with special skills in media and computers, must be trained teachers and part of the school's staff. The mainstay of the school library is still to lend books and other materials to pupils and teachers and to advise and assist in the use of these. But in addition to this, there shall also be the option of accessing information and experience from other media, *e.g.* the Internet. The school library functions as an "open learning centre" in the school.

Teachers' resource centres

Every county has its own teachers' resource centre, and many municipalities have also set up media centres. County resource centres serve the *Folkeskole*, the private schools and the gymnasiums in the county. The resource centres/media centres in the municipalities mainly serve the *Folkeskole*. Their functions are: lending of books and other teaching

materials; information on teaching materials; giving technical assistance to teachers in the production of their own teaching materials; producing exhibitions; lending of educational literature; preparing media workshops; offering in-service courses for teachers and library technical assistance to schools and other educational institutions.

Teacher education

At present, 18 colleges of education throughout the country offer teacher education. The colleges train teachers for the entire *Folkeskole*. Denmark has a unified teacher training system for the whole period of compulsory schooling. A number of features are particularly characteristic of the Danish system, the most salient of these being the broadness of the curriculum, the in-depth study of four school subjects and the integration of theory and practice that exists between didactics, psychology, school subjects and teaching practice. The admission requirements of the colleges of education are comparable to the admission requirements of the universities. The duration of training is four years, including 24 weeks of teaching practice.

Bilingual pupils

Bilingual pupils participate in the learning at the *Folkeskole* on an equal footing with the other pupils of the school. In order to strengthen the bilingual pupils' knowledge of Danish, they are offered language stimulation according to need from the age of three. If a bilingual pupil needs basic instruction in Danish, the pupil will be referred to teaching in a reception class, teaching in teams or individual teaching. Bilingual pupils who participate in the ordinary teaching, but who are in need of special support, are referred to supplementary teaching in Danish as a second language. Pupils from EU/EEA-countries as well as the Faroe Islands and Greenland are offered mother tongue teaching.

Annex 4 Private Schools in Denmark

Denmark has a tradition of private schools with a substantial government subsidy. This tradition mainly originates in the ideas and initiatives of the clergyman, poet and politician N.F.S. Grundtvig (1783-1872), and the teacher Christen Kold (1816-1870). On the basis of their ideas about a "school for life based on the living word", the first "folk high school" for adults was founded in 1844, and the first "free school" (private independent school) for children was founded in 1852. They were in particular meant to serve the rural population.

The ideas of Grundtvig and Kold had such an impact on the political thinking of their time that they were written into the democratic Constitution adopted by Denmark in 1849. It stipulates general compulsory education – not compulsory school attendance.

In Denmark, all children between the age of 7 and 16 must receive education but, provided a certain minimum standard is obtained, it is a matter of choice for the parents whether the education is received:

1. In the publicly provided municipal school,
2. In a private school or
3. At home.

Number of schools and pupils

About 12% of all children at basic school level (including the voluntary pre-school class and tenth year) attend private schools. In 2001, approximately 80 000 children attended 462 private schools, while 575 000 pupils attended the municipal schools of which there are approximately 1 725.

Types of schools

Private schools in Denmark may be roughly divided into the following categories:

- Small "Grundtvigian" independent schools in rural districts,
- Academically oriented lower secondary schools,

- Religious or congregational schools,
- Progressive free schools,
- Schools with a particular pedagogical aim, such as the Rudolf Steiner schools,
- German minority schools,
- Immigrant schools.

The bottom line is that private schools will be recognised and will receive government financing regardless of the ideological, religious, political or ethnic motivation behind their establishment. Some private schools are very old, some are quite new, and new ones are still being added. It is characteristic of the private schools that they are smaller than the municipal schools.

Legislation

All parties in the Danish Parliament want legislation ensuring financial support for private schools, partly based on the notion that the municipal schools will benefit from the experience and competition offered by the private schools.

The legislation contains detailed rules about government financial support but only the most general rules about the educational content. However, the schools may always come to the Ministry for advice if and when they need it, and the Ministry can take special action if needed.

Educational content

All that is demanded of private education is that it measures up to that of the municipal schools. The Ministry of Education confers on private schools the right to use the municipal schools' final examination and thereby exercises a form of indirect quality control. However, in principle it is not up to any government authority but to the parents of each private school to check that its performance measures up to the demands of the municipal schools.

It is the parents themselves who must choose a supervisor to check the pupils' level of achievement in Danish, arithmetic, mathematics and

English. If the pupil's knowledge is found inadequate, the supervisor must report it to the municipal council who may then assign the child to another school. Individual parents who are dissatisfied with a private school may move their child to another private school or to a municipal school. The local municipal school must always admit the child.

In extraordinary circumstances, the Ministry of Education may establish special supervision, for example if there is reason to believe that the school teaches Danish so poorly that the children's ability to cope with life in Denmark may be impaired.

In recent years, there has been a development towards decentralisation within the municipal school (the *Folkeskole*) system, which may be said to be a "free school-model" within the framework of the municipal *Folkeskole*. Generally speaking, the municipal school has the same curricular structure in all parts of the country, but there is a wide scope for variety based upon local government decisions. The Act on the *Folkeskole* of 1989 decentralised a great number of decisions to the new school boards where the parents are in the majority. The act also provided the parents with a free choice of school within their local community.

Public grants system

The private schools receive a grant "per pupil per year" for their operational expenditures, which in principle matches the public expenditures in the municipal schools – less the private school fees paid by the parents. This is to ensure that public expenditures for the private and municipal schools follow the same trend.

Operational grants

In 2002, the average grant towards the operational expenditures per pupil per year amounts to about DKK 35 200, and the average fees paid by parents amount to DKK 7 600. The actual grant per pupil varies from one school to another depending on three factors:

- The size of the school (number of pupils),
- The age distribution of the pupils, and
- The seniority of the teachers.

A large school with comparatively young pupils and comparatively young teachers will get a low grant per pupil per year, while the large grant per pupil goes to the small school with older pupils and teachers.

The grant distribution process consists of a computer-based calculation ruled by law, a few regulations fixed by the Ministry (including a special mathematical model) and a few controlled key figures.

Special grants

There are also a number of special grants, such as grants towards expenditures incurred in connection with the teaching of pupils with learning disabilities or other special needs. The Ministry of Education awards these grants on the basis of a case-by-case assessment. Another special grant is the additional grant received by the German minority schools in the south of Jutland, because they teach in two languages, German and Danish. The schools themselves administer some special grants. They include the additional grant received by the German minority because its schools teach in two languages and grants towards expenditures relating to pupil transport and free places.

Building grants

The schools receive a block grant per pupil to cover rent, maintenance, construction, etc. The schools receive a grant for their school-based leisure activities per pupil participating in these activities from the school's pre-school class to the third year.

Block grant

All grants (apart from grants relating to pupil transport and free places) are allocated as one total block grant independent of the actual expenditure. As long as this block grant is used for school and teaching purposes, the school is free to spend the money (and fix the school fees) according to its own priorities.

Grant conditions

To be eligible for public financial support, schools must be of a certain minimum size. A school must have a total of at least 28 pupils in the first to seventh years, though only 12 in the school's first year and 20 in its second year.

Furthermore, the school must be a self-governing institution with a board of governors responsible to the Ministry of Education and with rules regulating the use of any net assets in case of liquidation. The school's funds must only be spent for the benefit of this school and its activities. A school must not be owned by a private individual or run for private profit. Schools must be able to find a degree of self-financing. The requirement per pupil in 2002 is about DKK 4 400 per year.

Joint municipal financing

Education at the basic school level is in principle a municipal task, and the municipalities save expenditures for the pupils attending private schools. They are therefore required to reimburse the government a good deal of the government grant. In 2002, the municipal reimbursement rate is about DKK 26 800 per pupil.

Private upper secondary schools

The private upper secondary schools have the same public grant system as the private basic schools. There are about 20 such schools, and they cater to 6% of all upper secondary school pupils. They differ from the private basic school in that the content of their teaching is governed by the same rules as those applying to the county schools, the reason being that they both lead to the same final examination, *i.e.* the upper secondary school leaving examination (the *studentereksamen*).

Private and municipal schools enrollments

Table A4.1 Number of Pupils

School Year	Municipal Schools	Private Schools	Total	Percentage in Private Schools
1982/83	696 318	61 618	757 936	8.13
1983/84	674 182	62 962	737 144	8.54
1984/85	657 734	64 774	722 508	8.97
1985/86	642 792	66 372	709 164	9.36
1986/87	629 309	67 075	696 384	9.63
1987/88	608 815	67 087	675 902	9.93
1988/89	587 401	67 529	654 930	10.31
1989/90	567 049	67 039	634 088	10.57
1990/91	549 262	67 361	616 622	10.92
1991/92	536 822	66 130	602 952	10.97
1992/93	525 742	67 311	593 053	11.35
1993/94	516 988	67 077	584 065	11.49
1994/95	512 415	67 704	580 119	11.67
1995/96	513 695	68 095	581 790	11.70
1996/97	519 964	70 468	590 432	11.93
1997/98	592 202	71 391	600 593	11.89
1998/99	541 187	72 916	614 103	11.87
1999/00	551 567	75 630	627 197	12,05
2000/01	563 576	76 053	639 629	11,89
2001/02	575 492	80 111	655 603	12,21

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