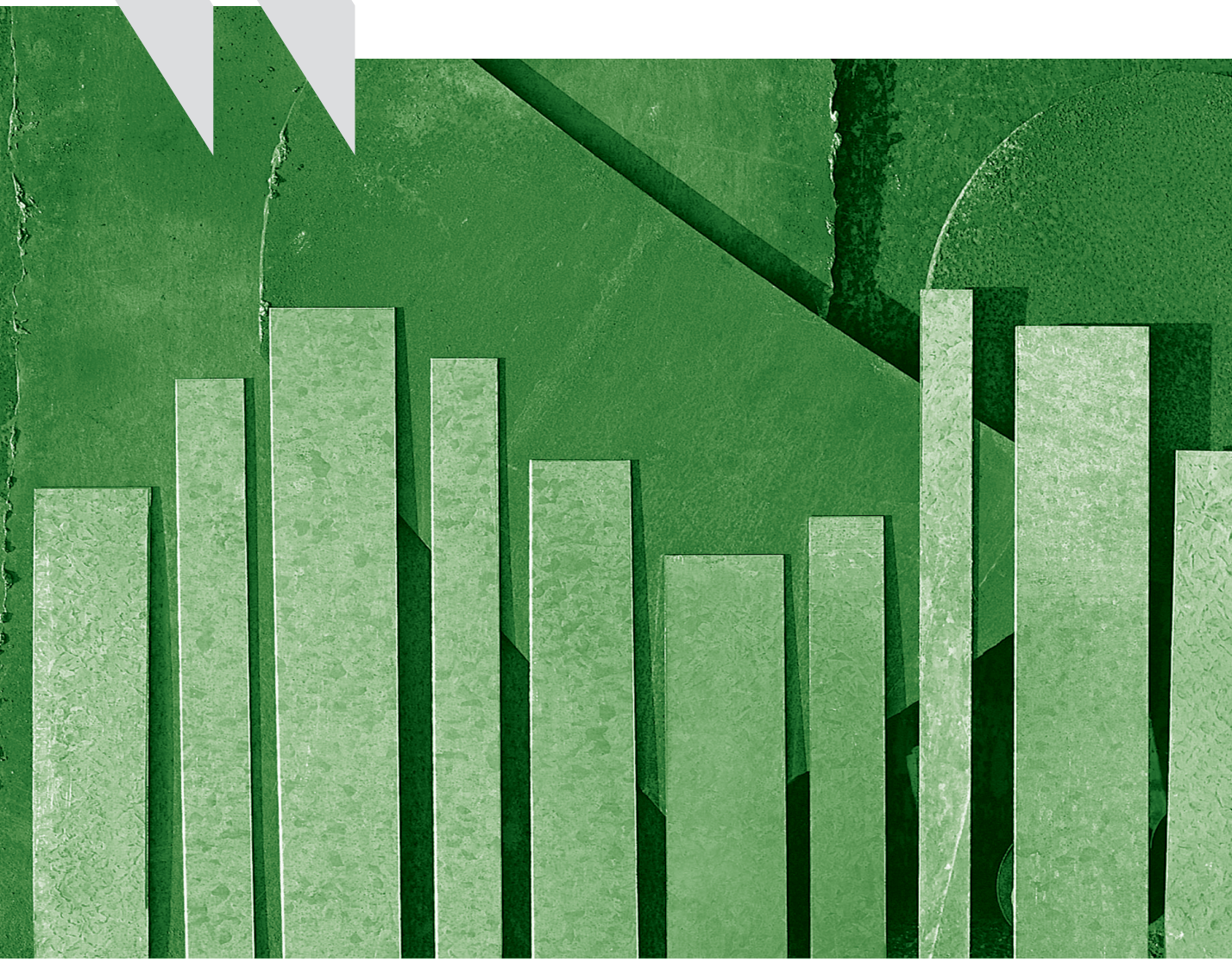
Students with Disabilities, Learning Difficulties and Disadvantages

POLICIES, STATISTICS AND INDICATORS



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Students with Disabilities, Learning Difficulties and Disadvantages

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2007



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Foreword

In 1995, the OECD's Centre for Educational Research and Innovation (CERI) published the first set of comparable data in the field of special needs education. This work strengthened the view that a different comparative framework would need to be developed if reliable and valid comparisons were to be made. In 1996 the first discussions began with countries on developing a resource-based definition. This would help to overcome different national interpretations of concepts such as special educational needs which cover very different populations of students experiencing difficulties in accessing the curriculum.

At the same time the UNESCO standards for classifying education systems (ISCED) were in the process of being revised and the definition of special needs education was updated and reformulated to reflect policy developments. In doing so, a much wider range of students, in all types of schools, were brought into the frame. In addition, the idea that extra resourcing may be needed to support schools in helping students access the curriculum more effectively was included in the new description.

It became clear, early on, that for policy relevant comparisons to emerge, a resource-based approach would require that the students included under this definition would need to be subdivided into some form of straightforward classification scheme. Countries agreed on a tri-partite system in which students are divided into three cross-national categories, A, B and C. Briefly, these cover:

- *Students with disabilities or impairments viewed in medical terms as organic disorders attributable to organic pathologies (*e.g. *in relation to sensory, motor or neurological defects). The educational need is considered to arise primarily from problems attributable to these disabilities (cross-national category "A/Disabilities").*
- *Students with behavioural or emotional disorders, or specific difficulties in learning. The educational need is considered to arise primarily from problems in the interaction between the student and the educational context (cross-national category "B/Difficulties").*
- *Students with disadvantages arising primarily from socio-economic, cultural, and/or linguistic factors. The educational need is to compensate for the disadvantages attributable to these factors (cross-national category "C/Disadvantages").*

The data provided in this book are based on the application of this model in practice.

This edition presents an updated (2002-03) account of the development of the work, and provides qualitative data to contextualise the quantitative information. It provides breakdowns by national category systems as well as comparisons using the cross-national framework described. Another feature of this edition is the presentation for the first time of trend data on these students covering the years 1999, 2001 and 2003.

The work was supported in 2005-06 by contributions from the US Department of Education, Office of Special Education and Rehabilitative Services (OSERS) as well as by additional funds from the following participating countries: Australia, Austria, Czech Republic, Belgium (Flemish Community), Finland, Germany, Greece, Hungary, Ireland, Japan (in kind), Korea, Mexico, Norway, the Slovak Republic, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

The book was prepared by the chief consultant to the project Colin Robson, Emeritus Professor, University of Huddersfield, and by Peter Evans, Katerina Ananiadou and Marcella Deluca of the OECD/CERI Secretariat, with the assistance of Philippe Hervé and James Bouch. The work reported in Chapter 7 of the book was carried out by Barbara LeRoy and Noel Kulik of Wayne State University and Claudia Tamassia, technical consultant on PISA 2003, in collaboration with the OECD Secretariat. The countries involved collaborated closely in all the stages of the work reported in this monograph.

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Chapter 1

Introduction

Background

This book is the fourth in a series published by the OECD on students with disabilities, learning difficulties and disadvantages.[1] It follows on from earlier work in the area and describes the continuation of a process intended to improve the quality and international comparability of the data available. In this way policy making in the field of education for disabled and disadvantaged students will be better informed.

Earlier work in the area had revealed the difficulty in comparing data in special needs education among countries. Two outstanding problems were identified. First, the term "special needs education" means different things in different countries. In some it covers only children with traditional disabilities, while in others it includes a broader range of students covering, for instance, disability, learning difficulty and disadvantage. Second, because of the wide variations in the definitions of disability and learning difficulty which are in use, the extent to which quantitative estimates for any particular category from different countries are comparable remains unclear. Furthermore, there has been in special education circles particular concern about the lack of educational utility of descriptive categories which are derived from medical classifications. Disability categories are viewed as having only partial implications for educational provision or for the development of teaching programmes, which inevitably have to take the whole child into account. In this way, therefore, categories based on medical descriptions are at best of only limited value to education policy-makers.

In 1997, the International Standard Classification of Education (ISCED) was revised. In the original version of the classification, special education was defined as the education provided in special schools, a definition wholly out of keeping with both theory and practice in many countries.

The most recent version of ISCED (ISCED 97) attempted to put this right and provides the following definition of special education:

> Special needs education – Educational intervention and support designed to address *special educational needs*. The term "special needs education" has come into use as a replacement for the term "special education". The older term was mainly understood to refer to the education of children with disabilities that takes place in special schools or institutions distinct from, and outside of, the institutions of the regular school and university system. In many countries today a large proportion of disabled children are in fact educated in institutions of the regular system. Moreover, the concept of "children with special educational needs" extends beyond those who may be included in handicapped categories to cover those who are failing in school for a wide variety of other reasons that are known to be likely to impede a child's optimal progress. Whether or not this more broadly defined group of children are in need of additional support depends on the extent to which schools are able to adapt their curriculum, teaching and organisation and/or to provide additional human or material resources so as to stimulate efficient and effective learning for these pupils (UNESCO, 1997).

It is clear that this definition substantially changes and updates the definition of special education – particularly in terms of resources made available – and it carries with it a requirement for a rather different operationalisation for the purposes of gathering statistics.

From special educational needs to disabilities, learning difficulties and disadvantages

Given the above context, the term "special educational needs" is not used in this monograph except where necessary for historical reasons. Instead the words disabilities, difficulties and disadvantages are used. These terms broadly describe the students[2] for whom countries make additional resources available so that they can access the curriculum more effectively.

In addition, in order to facilitate policy-making the data gathered on these students are presented separately for the following three cross-national categories: students with disabilities, difficulties and disadvantages (the categories are fully defined later in the chapter). Although some features are in common, there are a number of issues that do not apply across all three categories; for instance, those relating to the inclusion of disabled students into regular schools.

The resources-based definition

All OECD countries provide additional resources to help students with disabilities, difficulties and disadvantages access the curriculum and benefit as fully as possible from education. Further analysis of how these resources are used and for whom and to what ends becomes key to understanding whether education systems are as equitable as they should be. It is towards illuminating this goal that the data collection on students with disabilities, difficulties and disadvantages is directed. Given the very different approaches taken by member countries of the OECD, it is an area which should benefit from international comparisons.

Students with disabilities, difficulties and disadvantages were therefore identified through a supply-side approach based on resources made available. This approach has the advantage of being educationally based and at the same time fits with the intent of the ISCED 97 definition.

Thus, the definition of special needs education agreed is that "those with special educational needs are defined by the additional public and/or private resources provided to support their education". The use of this definition in a consistent manner calls for agreement about the term ADDITIONAL and an appreciation of the various kinds of possible RESOURCES PROVIDED which should be considered.

"Additional resources" are those made available over and above the resources generally available to students who are unlikely to have particular difficulties in accessing the regular curriculum.

Resources can be of many different kinds. Examples are:

- PERSONNEL RESOURCES. These include a more favourable teacher/student ratio than in a regular classroom where no allowance is being made for students with special needs; additional teachers, assistants or any other personnel (for some or all of the time); training programmes for teachers and others which equip them for work in special needs education.

- MATERIAL RESOURCES. These include aids or supports of various types (*e.g.* hearing aids); modifications or adaptations to the classroom; specialised teaching materials; etc.
- FINANCIAL RESOURCES. These include funding formulae which are more favourable to those with special needs (including classes where it is known or assumed that there are students with special needs); systems where money is set aside for special educational needs within the regular budget allocation; payments made in support of special needs education; and the costs of personnel and material resources.

One result of the resources approach is that it brings together students with special educational needs arising from very different causes, and it was recognised that a group formed in this way would itself need to be further sub-divided. To achieve this, a tri-partite categorisation system was devised based on perceived causes of difficulty in accessing the regular curriculum. Countries are asked to re-classify the data into this framework based on the classification and data collection arrangements used in their own national system following the operational definitions provided.

Operational definitions of cross-national categories[3]

The three agreed cross-national categories are referred to as "A/Disabilities", "B/Difficulties" and "C/Disadvantages" respectively.

Cross-National Category "A/Disabilities": Students with disabilities or impairments viewed in medical terms as organic disorders attributable to organic pathologies (*e.g.* in relation to sensory, motor or neurological defects). The educational need is considered to arise primarily from problems attributable to these disabilities.

Cross-National Category "B/Difficulties": Students with behavioural or emotional disorders, or specific difficulties in learning. The educational need is considered to arise primarily from problems in the interaction between the student and the educational context.

Cross-National Category "C/Disadvantages": Students with disadvantages arising primarily from socio-economic, cultural, and/or linguistic factors. The educational need is to compensate for the disadvantages attributable to these factors.

The present edition focuses primarily on the data provided by countries for the academic year 2002/03 and presents analysis and discussion based on these data. In addition, it contains a chapter examining trends in the data over the period 1999 to 2003 and a chapter on the participation of students with disabilities, difficulties and disadvantages in PISA 2003. More specifically:

- Chapter 2 provides an analysis of the qualitative data.
- Chapter 3 provides a comparative analysis of quantitative data based on categories used nationally to identify students who are in need of additional resources to help them access the curriculum.
- Chapter 4 provides an analysis of quantitative data for cross-national categories A, B and C.
- Chapter 5 provides an additional analysis of the quantitative data, including gender and age distributions.
- Chapter 6 provides analysis of the trend data for the years 1999, 2001 and 2003.
- Chapter 7 presents a study that examined the participation of DDD students in PISA 2003.

- Chapter 8 looks in more detail at the issue of over-representation of male students receiving additional resources for disabilities, difficulties and disadvantages.
- Chapter 9 provides a general discussion and conclusions.

The electronic questionnaire

As in previous rounds of data collection, an electronic questionnaire was used to gather data on students with disabilities, learning difficulties and disadvantages, thus allowing the development of a database, and of a methodology and technology compatible with the general education statistics work undertaken by OECD. It was put together to take account of the wide variety of national systems in use which was highlighted in the initial phase of the research and comprises:

- **Table 0** which requests information on any categories of students which are considered to fall within the resources definition and their classification into cross-national categories A, B or C.
- **Table 1** which asks for information on the starting and ending ages of various stages of education.
- **Table 2** which asks for information on the number of students with special educational needs in special schools, on the institutions (public and private), numbers of classes and on the teaching staff.
- **Table 3** which asks for information on the number of students with special needs in special classes, on the institutions (public and private), numbers of classes and on the teaching staff.
- **Table 4** which asks for information on the number of students with special needs in regular classes, on the institutions (public and private), and numbers of classes.
- **Table 6**[4] which asks for information on all students enrolled in special educational programmes classified by age as well as on those not registered in the education system.

In addition, information on total numbers of students in each level of education, including compulsory, is requested as well as gender breakdowns.

The nature and sources of the database for this monograph

The following 17 OECD countries and provinces and one non-member economy submitted quantitative data for 2003: Austria, Belgium (Flemish Community and French Community), the Czech Republic, Finland, Germany, Greece, Hungary, Japan, Luxembourg, Mexico, the Netherlands, the Slovak Republic, Spain, Switzerland, Turkey, the United Kingdom (England) and the United States and Chile.

The data are provided by national authorities from databases already gathered in countries for administrative purposes. The work reported has benefited from close collaboration between the OECD/CERI Secretariat and country representatives and the data presented are therefore as accurate as possible.

Because it has not yet proved possible to use the programmatic definitions of the ISCED levels, the terms pre-primary, primary, lower secondary and upper secondary are used as proxies for ISCED levels 0 to 3.

Data limitations

Despite increasing agreement about the cross-national definitions and growing adherence to these definitions among countries when allocating their individual country categories, there remain some divergences. Work is continuing on harmonising international reporting of these data. For example, the allocation of national categories to cross national categories A, B and C is permanently under review. Work is also continuing to provide full data sets on all national and cross-national categories. New work based on local data gathering has been initiated for this purpose.

Symbols for missing data

Five symbols are employed in the tables and graphs to denote missing data:

a Data not applicable because the category does not apply.

m Data missing.

n Magnitude is either negligible or zero.

x Data included in another category/column of the table.

Country name abbreviations[5]

Australia	AUS	Italy	ITA
Austria	AUT	Japan	JPN
Belgium (Flemish Community)	BEL (Fl.)	Korea	KOR
Belgium (French Community)	BEL (Fr.)	Luxembourg	LUX
Canada (Alberta)	CAN (Alb.)	Mexico	MEX
Canada (British Columbia)	CAN (BC)	Netherlands	NLD
Canada (New Brunswick)	CAN (NB)	New Zealand	NZL
Canada (Saskatchewan)	CAN (SK)	Norway	NOR
Chile	CHL	Poland	POL
Czech Republic	CZE	Portugal	PRT
Denmark	DNK	Slovak Republic	SVK
Finland	FIN	Spain	ESP
France	FRA	Sweden	SWE
Germany	DEU	Switzerland	CHE
Greece	GRC	Turkey	TUR
Hungary	HUN	United Kingdom	GBR
Iceland	ISL	United States	USA
Ireland	IRL		

Notes

1. The three previous monographs are: OECD (2000), *Special Needs Education: Statistics and Indicators*, OECD, Paris; OECD (2004); *Equity in Education: Students with Disabilities, Learning Difficulties and Disadvantages*, OECD, Paris; and OECD (2005), *Students with Disabilities, Learning Difficulties and Disadvantages: Statistics and Indicators*, OECD, Paris.
2. The term student is used. It is to be regarded as synonymous with pupil or (school) child. When discussing pre-primary aged children, the term child/children is used as student seems inappropriate at this age level.
3. These definitions are to be seen in the context of the resources definition. Allocation of national categories to a particular cross-national category is based on the reason for provision of additional resources.
4. In the original data collection instrument, Table 5 requested data on programmes in national categories according to the ISCED definitions. Countries were unable to provide this information and as a result the table was dropped. To avoid confusion likely to be caused by renumbering the tables it was decided to keep the original numbering of the tables and simply omit Table 5.
5. All countries are OECD members with the exception of Chile.

References

UNESCO (1997), *International Standard Classification of Education*, ISCED, UNESCO, Paris.

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Chapter 2

Analysis of the Qualitative Data

Background

This chapter analyses the qualitative data provided by the participating countries; these include information on:

- The country's definition of special education used for gathering educational statistics.
- The use of categories in gathering data in this field along with the names and definitions of the categories and whether or not they fall within the resources definition.
- Whether there are categories of students that fall within the resources but not the national definition of special needs.
- How the categories fit into the cross-national categorisation A, B and C.
- How planning decisions are made to ensure that students with special educational needs receive appropriate additional resources.
- Whether there is specific coverage of special educational needs in the current legislative framework and if so what it is.
- Factors considered to be facilitators of inclusion and equity, and factors acting as barriers to inclusion and equity.

The following sections synthesise the information that was provided between 1996 and 2005 by all 30 OECD member countries (Australia, Austria, Belgium [Flemish Community], Belgium [French Community], Canada [Alberta, British Columbia, New Brunswick and Saskatchewan], the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, Norway, New Zealand, Poland, Portugal, the Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom [England] and the United States) and one non-member economy (Chile).

Laws

All countries surveyed have, or are currently preparing or reviewing, laws covering special education provision ensuring access to education for all students. Some are more specific than others. In the United Kingdom (England), for instance, a definition of learning difficulties is given in the Education Act (1976). Various Acts of Parliament, such as the Education Act 1969 and the Special Educational Needs and Disability Act 2001 (SENDA) established the legal rights for students with special educational needs. The SEN Code of Practice (2001) provides practical advice to Local Education Authorities, maintained schools, early years settings and others on carrying out their statutory duty to identify, assess and make provision for children's special educational needs.

In contrast the laws in the Czech Republic are framed mainly with regard to provision for students with disabilities, difficulties and disadvantages, and the validity of Czech sign language for those with severe hearing disabilities. This latter situation is currently under review with the goal that special education will be included within the general framework of regular schools. Iceland, too, has no separate law for special education; this is covered in a sub-section of the general laws on education.

In Hungary, the term "special educational needs" was officially introduced in 2003 (modification of Act LXXIX 1993 on Public Education). It includes students with physical and sensory disabilities, speech difficulties and autism, but not students with "adaptive, learning and behaviour difficulties" and "disadvantaged students"; the latter receive other types of extra resources.

The most significant change in these legal frameworks is a move towards inclusion. This is being driven by an agenda comprising human rights issues, equity, parental involvement and social cohesion with the growing understanding that the concept of special educational needs implies that students' failures to make adequate progress in their learning are in large part the responsibility of the school and cannot be viewed as being caused wholly by the "disability" diagnosis.

These changes in thinking are reflected, for instance, in the Netherlands where new laws on Primary Education (WPO) and on special education (WEC) came into force in 1998 and 2003. The WPO regulates primary education including the education of children attending special primary schools. According to the WPO, primary schools (including special primary schools) should offer all children appropriate instruction and an uninterrupted school career. All children should receive instruction appropriate to their educational needs, promoting intellectual and emotional growth and creativity and oriented towards inclusion. Directly linked to this new funding system is a re-organisation of special education. The number of different special schools was reduced in August 2003 to four types of expertise centres for students with visual, communication, physical and mental disabilities and severe behaviour problems. Parallel arrangements for older students came into force with a Secondary Education Act.

A recent decree on equal opportunities in the Flemish Community of Belgium (15 July 2005) establishes the rights of all children to be educated in a regular school. Governing bodies of mainstream schools can only refuse to enrol a student if they can prove that they have insufficient pedagogical or teaching resources and a written statement justifying this decision has to be made available to parents in case of refusal. The interactive compensatory view of special educational needs has in some countries led to an expansion of the numbers of students under consideration to include those with disadvantages. Denmark and Spain use the term "special education requirements" reflecting the fact that many students need a flexible approach to engender achievement. The 2002 *Ley Orgánica de Calidad de la Educación* (*LOCE*) provides for the inclusion of students with special needs (including gifted and talented students) in mainstream schools.

Furthermore, some countries, for instance Mexico, recognise that some disabled students may not have special educational needs. This follows from the observation that if certain disabilities are being skillfully handled in a school as part of the regular provision, additional help to access the curriculum is not needed.

The recognition that schools need to adapt is reflected in other modifications to educational delivery. In 2002, the Government of Saskatchewan in Canada announced two primary functions for schools: to educate children and youth, and to support service delivery. The education system is working across jurisdictions to provide for the needs of an increasingly diverse population. Also, when special needs students are included in regular classes, class sizes are sometimes reduced. In Hungary, for example, a student with special needs counts as two or three non-special needs students. So a class of 16, comprising two partially hearing students and 14 others would be equivalent to a class of 20 all non-special needs.

More recent directives describe the necessary modifications and extensions to the national core curriculum. To help regular schools adapt, outreach from special schools to regular schools is encouraged as is the development of clusters of schools. The aim here is to help regular schools to develop the skills that are necessary for a more effective inclusion of students with special needs. This approach has been described more fully elsewhere, *e.g.* in Canada (New Brunswick) (OECD, 1999).

Many countries also offer an extension in age of formal education for disabled students. In New Zealand, this can range from the under fives right up to the age of 21.

In Chile, the law includes provision for children in hospitals, with children in compulsory education who are hospitalised for three months or more receiving teaching in hospitals.

The significance of parental involvement is also widely recognised especially with regard to assessment arrangements. More and more parents (for instance in Italy) are given the right to have their disabled child educated in regular schools (OECD, 1999).

Making planning decisions to ensure that students with special educational needs receive appropriate additional resources

Sixteen countries and four Canadian provinces (Alberta, British Columbia, New Brunswick and Saskatchewan) provided information on this issue, approaching the topic from many different viewpoints.

The majority of countries make planning decisions within the context of a national legal framework for identifying special needs students which includes providing additional resources. This is different in countries with a federal structure however. In the United States, for example, federal laws require that states establish inter-agency agreements with agencies responsible for services for special education students; in Switzerland, on the other hand, there is no comprehensive uniform statutory approach.

Within these legal frameworks special education students are identified and classified to varying degrees of complexity often via a multi-disciplinary approach, as is the case for example in Luxembourg. These classifications form the basis for resource allocation. In Canada (Alberta), for instance, 9.88% of students were classified as having mild/moderate disabilities in 1999/2000. In order to meet their special needs, a particular sum is added to the regular per capita student funding and school boards pool these resources to meet the needs of these students. In addition, 2.58% of students described as having severe disabilities receive extra funding in addition to the regular per capita allowance. Other countries (*e.g.* Finland and the Netherlands) seem to have more complex arrangements but student classification remains the basis of subsequent statistical data gathering and planning. Resulting budgets may be determined for five-year periods (*e.g.* the Netherlands) or annually (Mexico). Other countries such as Sweden appear to have looser, often decentralised, arrangements. In Germany, both qualitative and quantitative evaluations are part of the identification process.

Countries vary considerably in their monitoring arrangements for ensuring that funds allotted for special education are used appropriately. In Canada (British Columbia), for instance, there is a reporting and auditing process to ensure compliance. Schools themselves are also reviewed and individual education plans for special needs students are required. This centralised process looks very different from the decentralised models that are in place in countries such as Norway and Sweden. These countries appear to have less strong monitoring

procedures in place and in Sweden, in particular, there is a well-used complaints procedure for parents who feel that their child is not receiving adequate support.

Methods are not uniformly applied across the three cross-national categories A, B and C. For instance, resources for students in special schools (usually in category A) are often based on actual numbers, but for students from disadvantaged backgrounds (category C) the amount of resources may be determined on the basis of local indicators leading to block grants (*e.g.* in Italy) or to the funding of education priority zones (ZEPs) (*e.g.* in France). In the Netherlands, resources needed for students in category A in regular schools are estimated from projections.

At the classroom level, countries also vary in their degree of specificity. As explained above, in Hungary, for example, one special needs student counts for two or three regular students in the calculation of class sizes. In Canada (New Brunswick), on the other hand, the Superintendent must make sure that appropriate provision is made. Several countries make arrangements for students who cannot easily attend school to receive education at home and many extend the age range beyond the normal compulsory school age limits.

Facilitators and barriers to equity and inclusive education

Countries were asked to identify characteristics of their educational systems which they believe act as either facilitators or barriers to equity and inclusive education.

Given the diversity of systems involved, it is not surprising that answers covered a wide range of topics from the legal system to the practicalities of assessment.

Legal frameworks

Many countries commented on the importance that legal and policy frameworks may play in encouraging inclusion and equity and creating respect for diversity or in creating barriers. Free compulsory education for all children and youth, and mandated integration, were identified as obvious facilitators in Mexico since, if children are not in the system, they can hardly be included. Greece identified the opportunities provided by the EU Helios programme on the inclusion of disabled students into mainstream schools as being especially helpful in achieving changes in attitudes and practices. In the United States, the Individuals with Disabilities Education Improvement Act [IDEA] (2004), the No Child Left Behind Act (2001), and the 1973 Rehabilitation Act serve to guarantee education and the necessary services in the least restrictive environment. In Greece, general educational reform, the development of new pedagogies and the implementation of new technologies were seen as beneficial for inclusion.

The monitoring of the laws for compliance was also given importance in some countries (*e.g.* Canada [British Columbia]). In Italy, the legal change of 1977 is credited with leading to a change in society stimulating a positive acceptance of disability where the school, for instance, is treated as a little community. In Switzerland, decentralisation of the educational system was also cited as a factor beneficial for inclusion. France noted that the central concept of education inhibits the individual treatment of students and the implementation of individual programme planning. Other countries also noted that policies for inclusion were not always implemented consistently.

This relatively straightforward position may, however, be contrasted with other complex effects which appear when policies are put into practice. In Austria, for instance, the abolition of statements of special needs for some students was considered to be a

barrier to the effective education of disabled students since without these statements students are obliged to follow the school's regular programme. In addition, special schools provide two more years of education compared to regular schools. In contrast in Belgium (Flemish Community) the stigmatising effects of assessment and a heavy bureaucratic approach were identified as barriers to inclusion.

Educational structures

The historical structure of the education and special education systems were frequently cited as an important barrier. These have led to inflexible school organisation (tracking, for instance, was viewed as a barrier to inclusion), very large class sizes, a lack of relevant teaching skills and of individualised teaching programmes, prejudiced attitudes on the part of teachers and parents, poor or limited teacher preparation, biased funding systems, unhelpful contractual agreements involving employers and trade-unions, and a lack of co-operation between relevant ministries and services.

More recent developments in some countries, such as the existence of pre-schools, special classes and special schools, a range of placement possibilities, improved pre- and in-service training for teachers and links between special and mainstream schools were viewed as facilitators.

Funding

Funding of special education was also identified as a key factor. The creation of a level playing field for funding which does not bias placement decisions was seen as an important facilitator. In some countries, *e.g.* Denmark, Finland, Hungary and New Zealand, funds follow students and not schools and, at least in principle, this opens the way to inclusive practices. A paradox emerged in New Zealand with regard to the decentralisation of the special educational needs grant. While central control was viewed as a barrier to inclusion, and decentralisation seen as an important way to help local authorities implement relevant inclusive policies, decentralisation in the form of the local management of schools in New Zealand was seen as a barrier. A general lack of funds and bias in funding formulae were both perceived to be barriers. Other countries, *e.g.* Switzerland and the United States, reported inconsistencies in the way funding formulae worked at local level while for others the lack of resources and the complexity of their delivery were viewed as barriers. Cuts in spending seemed to encourage segregated provision, perhaps partly because special schools were safeguarded but also because parents, perhaps for the same reason, thought that their children would receive higher quality provision there.

That resources are needed to develop inclusion and equity cannot be denied. Mexico for instance has made modifications to buildings and provided free textbooks and materials (including translations for the indigenous communities) aimed at students with disabilities, difficulties and disadvantages. Chile also provides free textbooks and other teaching and learning materials to support teaching in special education. However it was also indicated that funding is often not sufficient to cover all the extra costs incurred by students with special needs, particularly with regard to the recruitment of specialist staff. Scholarships have also been made available for students living in isolated areas. In Finland, nutrition and transport for special needs students are arranged and in Canada (British Columbia) extra funds are made available for in-service education (INSET) and a telephone help line. The government there has also made loans available for the purchase of expensive equipment.

In Belgium (Flemish Community) the Decree on Equal Opportunities of 28 June 2002 (amended on 15 July 2005) created a system of extra resources to provide adequate learning opportunities for children in less favorable socio-economic or socio-cultural conditions in compulsory education. This education programme replaces the former education priority policy, *onderwijsvoorrangsbeleid*, and extending care policy, *zorgverbreding*.

Assessment and training

Many countries mentioned that assessment practices can both facilitate and hinder inclusion. In Sweden, a change from a norm- to a criterion-based model of pupil assessment led to more students with severe learning difficulties being identified as "failing" and this increased the likelihood of special school placement. In Canada (Alberta), annual tests with well-planned accommodations were reported as facilitating inclusion while at the same time they were also seen as being a way of excluding students with difficulties from the testing arrangements. The reason given for this was fear on the part of schools that including students with special needs would lower average scores – an outcome challenged by research conducted in Alberta, which found just the opposite result.

In many countries, even for those who have been practising inclusion for many years, lack of training and skills was identified as the main barrier. This appeared to hold at all levels of pre-service and in-service training, while a weakness in university level training was identified by Canada (New Brunswick). The development of individual training programmes, preventive measures and early diagnosis were identified as important factors. In Canada (Saskatchewan), the degree of self-confidence of classroom teachers and school administrators was also cited in the face of growing pupil diversity and the need for more appropriate INSET and skill development. Class sizes were seen as a barrier to inclusion as was the need for effective support services, *e.g.* educational psychologists, speech/language pathologists, social workers and the use of classroom aids.

Others

Other aspects of the educational structure were seen as barriers. These included a shorter period of education for regular students, in contrast to that available for those with disabilities, and the structure of primary education itself. At the classroom level, class size and streaming or tracking were seen as barriers. The lack of specialists and the proper use of teachers' aides were seen as obstacles to be overcome. On the positive side, the addition of extra teachers was a facilitator presumably because they bring additional skills to the classroom, allow for joint planning and lead to a reduction in pupil teacher ratio in classes where disabled students are included.

The involvement of parents as advocates facilitated inclusion whereas the lack of parental involvement and knowledge were viewed as barriers.

The existence of educational priority policy and non-discriminatory equal opportunities were also important in the fight for equity and deliberately balancing the numbers of ethnic minorities in schools was seen as a positive equity measure.

Definition of special education for gathering statistics

Based on the returns from the countries who responded to this question, the definitions of special education for the purposes of gathering national statistics may be grouped into four basic patterns.

Table 2.1. **Classification of nationally gathered categories used in collecting data within the national definition of special educational needs**[1]

Countries/Patterns	Disability categories only	Disability categories plus disadvantaged students	Disability categories plus gifted and talented students	Essentially non categorical systems
Australia	✓			
Austria	✓			
Belgium (Fl.)	✓			
Belgium (Fr.)	✓			
Canada (Alb.)			✓	
Canada (BC)			✓	
Canada (NB)	✓			
Canada (SK)	✓			
Czech Republic		✓		
Denmark				✓
Finland	✓			
France	✓			
Germany	✓			
Greece		✓[2]		
Hungary	✓			
Ireland		✓[2]		
Italy	✓			
Japan		✓[2]		
Korea	✓			
Luxembourg	✓			
Mexico			✓	
Netherlands	✓			
New Zealand		✓		
Norway				✓
Poland		✓		
Portugal	✓			
Slovak Republic		✓		
Spain			✓[3]	
Sweden		✓		
Switzerland		✓[2]		
Turkey			✓[3]	
United Kingdom (Eng.)				✓
United States	✓			
Chile		✓		

1. This table combines 1996, 1999, 2001 and 2003 data.
2. Includes learning difficulties linked to linguistic barriers or disadvantage associated with ethnic groupings.
3. Includes disadvantaged students.

Almost all countries collect data via disability categories, but the term disability often has different meanings in different countries, and sometimes there may even be variation within the same country, as is the case, for example, in France, where there exist two alternative definitions used by two different ministries.

Secondly, there are some countries, *e.g.* Greece, Ireland and Switzerland, which also include disadvantaged students. Additionally, some countries (*e.g.* Switzerland) include children with a foreign first language within these categories whilst others do not.

Thirdly, some countries, *e.g.* Canada (Alberta and British Columbia), Mexico, Spain and Turkey, also include gifted and talented students.

The fourth approach used in Denmark, Norway and the United Kingdom (England) is to base provision on the need to respond to exceptional cases leading to perceived difficulties in the schooling process rather than defining students *per se* via a categorical approach.

These data are summarised in Table 2.1.

Use of categories

The data show that most countries gather data by means of categories and this question invited them to provide the names of the categories and their definitions. Most countries were able to provide definitions and the outcomes are provided in full in Annex 1 which reveals the complexity of the different arrangements. In this annex, the national categories have been placed into cross-national categories A, B and C according to the classifications provided by the countries themselves as requested and as modified in subsequent discussions. Definitions of the categories are also provided where available. In addition, those categories which receive additional resources but which are not part of the national special needs category system are included in the table. A detailed analysis of data based on national categories is provided in Chapter 3.

Some countries report having categories which receive additional resources but which lie outside their national definition of special needs. These tend to cover disadvantaged students, students from ethnic minorities and those with short term learning problems or specific learning difficulties. However, some countries also include gifted students or students with mild behaviour problems and speech impairments.

A small number of countries fit into the fourth classification pattern described above. This approach deserves further comment. The Canadian province of New Brunswick does not keep categorical data but does have categories which receive resources which are not part of the special needs framework. The United Kingdom (England) does not gather data by categories; for the current data collection round it was able to identify students with special needs with and without statements who received extra resources and these two groups are used as proxies for categories A and B respectively. Denmark also has a non-categorical system but makes a distinction between students with more extensive special needs (about 1%) who have the most severe disabilities and who need extensive support with their learning and those with less extensive needs (about 12%), including those with disadvantages. This framework is conceptually similar to that of the United Kingdom (England) where 2.74% of students in compulsory education have statements of special educational need while a further 14.41% have special educational needs but do not have statements. Funding arrangements for these two groups are different. In these three countries resources are made available for the increased costs which arise in educating students with special educational needs, but they are allocated through local decision-making structures.

Cross-national classification

Countries were asked to carry out the task of re-classifying their categories, both national and resource-based, according to the cross-national model described in Chapter 1.

The allocation of national categories to cross-national categories was discussed and agreed upon at regular meetings of country representatives and the results are summarised in Annex 2.A1 at the end of this chapter.

Annex 2.A1 reveals that the majority of countries use categories to classify their special needs population for the purposes of statistical data gathering. In terms of national

categories, *i.e.* excluding those that additionally fall into the resources definition, they vary in number between 2, *e.g.* the United Kingdom (England), and 19 in Belgium (Flemish Community), Poland and Switzerland. Between these two extremes many countries appear to use 12 or 13 categories. Although the categories used cover broadly similar disabling conditions, in many countries actual definitions in use render comparisons difficult. For instance, with regard to students with learning difficulties, it is not always possible to distinguish between students with severe learning difficulties, moderate learning difficulties, mild learning difficulties and learning disabilities. Some countries gather data on students who are blind or have visual impairment separately, others group them together, and similarly for those with serious or partial hearing impairments. Students with emotional and behavioural problems also represent an interesting case because in Greece, Hungary, Italy and Turkey there is no such category.

The increased availability of detailed definitions for most national categories has increased the reliability of their allocation to cross-national categories A, B and C, since the understanding of the wide variety of national category names is facilitated. However, some anomalies still remained, and this led to the need to re-allocate some national categories.

The main proposed reallocation was of "mild mental handicap" and similarly named categories from cross-national category B to A. This was mainly because while some countries have a separate "mild mental handicap" category which was placed in B, others have wider categories including both mild and more severe mental handicap, currently allocated to A. Placing all mental handicap and similarly-named categories in cross-national category A removes the inconsistency.

A similar reallocation of "children suffering from protracted illnesses", "health impaired" and similarly named categories from B to A was agreed. During earlier allocations, while B was a residual category, there was some justification for allocating these students to B (in that these categories are somewhat different from the typical categories currently in A). Their reallocation helps in framing a coherent substantive definition for B.

This discussion of the results of the findings on national categories and the way they are allocated to the cross-national categories A, B and C strongly supports the rationale of the present study. That is, if meaningful international comparisons are to be made, a method such as the one developed here, which includes all children receiving additional resources and their assignment into straightforward and operationally defined categories, substantially simplifies the situation and improves the possibility of making policy-relevant decisions based on internationally valid comparisons.

Concluding comments

In general terms, the qualitative data gathered during the study reveal the great national interest in this area as laws, policies and educational provision are adjusted to meet the needs of students who are failing in the regular system. Factors thought to be facilitators for or barriers to equity and inclusion cover a whole range of issues, including legal frameworks, funding models, assessment arrangements, school structure, class size, individual teaching programmes, involvement of additional teachers and aids, teacher training, parental involvement and co-operation with other services. Together these make a substantial agenda for reform.

The quantitative data gathered by means of the electronic questionnaire are examined in detail in the next four chapters.

ANNEX 2.A1

Allocation of Categories of Students with Disabilities, Difficulties and Disadvantages included in the Resources Definition to Cross-national Categories A, B and C (based on 1999, 2001 and 2003 data returns)

Austria

Cross-national category A

2. Physically disabled. Students who need special education, additional measures and facilities due to their physical disability.

3. Speech impairment. Students with communication disorders that adversely affect their educational performance in a way that requires special education.

4. Hearing impaired or deaf. Students whose ability to hear is affected in such a way that even with hearing aid they need special education.

5. Visually impaired or blind. Students whose visual faculty is restricted in such a way that even with correction they need special education.

7. Severe mental disability. Students who are severely mentally disabled and whose curriculum therefore is based on training of everyday activities.

8. Ill students in hospital. Students who are being treated in clinics, hospitals or sanatoriums for a long period of time and who are capable of taking part in lessons.

10. Moderate speech problems. Students with speech problems but without certified special educational needs. Provision is made by a special mobile service in or outside the classroom. No statistical data on this large group are available.

Cross-national category B

1. Learning disability. Students needing special education due to an extensive and long lasting deficiency in their learning ability. The aims and contents of the mainstream curricula cannot be followed but the special curricula are orientated towards the mainstream curricula.

6. Behaviour disorders. Students who need special education due to their severe behavioural disorders.

9. Specific or subject related learning difficulties (*e.g.* dyslexia). Students with learning difficulties but without certified special educational needs. Provision is made by a special mobile service in or outside the classroom. No statistical data on this large group are available.

11. Moderate behavioural problems. Students with behavioural problems but without certified special educational needs. Provision is made by a special mobile service in or outside the classroom. No statistical data on this large group are available.

Belgium (Flemish Community)

Cross-national category A

1. Minor mental handicap – Type 1. Type 1 education is offered to children with mild mental disabilities so that they are able to acquire basic school knowledge and skills and receive vocational training that will enable them to be integrated into regular socials and professional environments. This type of education is only available at primary and secondary level (*i.e.* not at pre-primary schools).

2. Moderate or serious mental handicap – Type 2. Type 2 education is offered to children with moderate to severe mental disabilities. Through social education and special vocational training, children with moderate mental disabilities are prepared for integration in a protected socio-professional environment. Their level of self-reliance is improved through special educational activities. This type of education is available at pre-primary, primary and secondary level.

4. Pupils with a physical handicap – Type 4. This category covers pupils with a physical handicap. Type 4 education is offered to children with physical disabilities, other than those mentioned in types 5, 6 and 7, who are not able to receive education in a standard school because they regularly need medical or paramedical treatments and/or special teaching materials. This type of education is available at pre-primary, primary and secondary level.

5. Children suffering from protracted illness – Type 5. Type 5 education is offered to children who suffer from a protracted illness and receive medical treatment in a hospital or in a medical pedagogical institute organised or accredited by the State. This type of education is available at pre-primary, primary and secondary level.

6. Visual handicap – Type 6. Type 6 education is offered to blind or visually impaired children who regularly need medical or paramedical treatment and/or special teaching materials. This type of education is available at pre-primary, primary and secondary level.

7. Auditory handicap – Type 7. Type 7 education is offered to deaf or hearing impaired children who regularly need medical or paramedical treatment and/or special teaching materials. This type of education is available at pre-primary, primary and secondary level.

9. Support at home for children who are temporarily ill. Temporary home based education applies to both ordinary and special primary education (except for type 5 schools). A child of compulsory school age in primary school has the right to receive temporary home based education when all of the following conditions apply: an absence of over 21 calendar days caused by an illness or an accident; the parents have submitted a written request, accompanied by a medical certificate, to the principal of the school providing home based education. The medical certificate should show that the child is not able to come to the school but is allowed to be educated; the distance between the school site and the pupil's residence should not exceed 10 km for ordinary education or 20 km for special education. The home based education is provided from the 22nd calendar day of absence and continues until the child is able to return to his or her regular school. Should the child suffer from the same illness or accident within three months, the 21 day waiting period does not apply. In order to organise the home based education, four additional teaching periods per week and per pupil are financed or granted. The travel expenses incurred by the staff member providing the home based education are repaid according to the value of a first class train ticket.

Pupils in permanent home based education are also included in this category. Pupils at compulsory school age who satisfy the admission requirements for special primary education but for whom it is impossible to be educated in a school due to a handicap, are entitled to permanent home based education. This does require a recommendation from the Special Education Advisory Committee. Great distance to a school, long transport time, etc., do not qualify as reasons for applying for permanent home based education. The deciding factor is the seriousness of the handicap which prevents education at school, although the child is able to receive education. The school receives four additional teaching periods per week to organise the permanent home based education. These additional teaching periods are to be performed by a member of the teaching staff and they can never contain any therapeutic treatments.

Belgium (Flemish Community) *(cont.)*

Cross-national category B

3. Serious emotional and/or behavioural problems – Type 3. Type 3 education is offered to children with personality disorders. They suffer from severe structural and/or functional disorders in the affective dynamic and relational aspect of their personality, which make special educational and psycho therapeutic measures necessary. This type of education is available at pre-primary, primary and secondary level.

8. Serious learning disabilities – Type 8. Type 8 education is offered to children with severe learning disabilities. Although their mental, visual and hearing abilities are normal, these children suffer from disorders in language development and their skills of speech, reading, writing and/or arithmetic. This type of education is available only at primary school level.

11. Remedial teaching in ordinary primary education. The total number of teaching periods in primary education is designed in such a way so that primary schools have the opportunity to devote special attention and care to children with learning or developmental difficulties. One of the most important goals of giving the schools this autonomy is to make sure that they can offer remedial teaching. In primary education, pedagogical reform is ensured by working with differentiation elements, carrying out different groupings and taking maximum advantage of remedial teachers. In addition, a lot of attention is paid to consultative conversations between the regular teachers and the remedial teacher, and between the regular teachers, the remedial teacher, the members of the Pupil Guidance Centre, and the head teacher. One teaching period for the remedial teacher per group of 20 pupils is the minimum. It is the remedial teacher's task to help children with learning or developmental difficulties and to detect barriers to learning. The guidance takes place individually or in small groups or as assistance within the regular classroom, depending on the pupils' needs. The remedial teacher's presence is not based on additional teaching periods or allowances, but is made possible through the flexible allocation of the total number of teaching periods that is assigned to each school based on the total number of pupils. This total package of granted teaching periods is called omkadering.

Cross-national category C

10. Extending care. For a few years now, the Flemish Government has been developing a programme for *zorgbreedte* (extending care). It is rather difficult to translate this concept. It is associated to, for example, ideas on "inclusive education". The idea is to organise early attention for those children who might suffer from learning difficulties that may cause problems in the transition between pre-school and primary school. Additional teachers, schools for special education and the pupil guidance centre (CLB) work closely together with the pre-school teacher. Attention is given to general language proficiency, social skills, prevention and remediation of learning difficulties, socio-emotional problems and co-operation with parents. The target group consists of children who live in less favourable economic and cultural circumstances but who are capable of participating in ordinary education when certain deficits are addressed.

12. Educational priority policy. The languages of immigrant populations are not legally recognised as minority languages. Nevertheless, a special policy has been instituted within the education system to provide students from those linguistic backgrounds adequate learning opportunities, especially in compulsory education. This policy is called *onderwijsvoorrangsbeleid* (educational priority policy). It is applied at primary and secondary level in schools with a significant number of children of immigrants or refugees. Schools must develop an educational approach focusing on the quality of the teaching of Dutch, intercultural education, the tackling of learning and developmental problems and co-operation with the immigrant families.

Belgium (Flemish Community) *(cont.)*

13. Reception classes for pupils who do not speak Dutch. Reception education is education for immigrant school entrants who do not speak Dutch and this is to develop their knowledge of Dutch and to facilitate their social integration. After this reception education, the pupils can enrol in regular education (primary or secondary school level). Reception education encourages the active integration of these children in school life. The focus is on the relationship with teachers and the peer group. In primary education, schools with at least four foreign pupils who do not speak Dutch (anderstalige nieuwkomers) and who do not fully understand the language used at school may organise a special language adaptation course for three periods per week. In secondary education, this type of education is organised in 29 selected schools which have at least ten foreign pupils who do not speak Dutch.

14. Travelling children. Two small scale specific projects are included in this category. The first concerns the reception of pre-school children of the travellers who are employed (*e.g.* circus, bargemen, showmen). The second project includes three primary schools that focus on the reception of gypsy children.

15. Children placed in a sheltered home by a juvenile court. These children are placed in a sheltered home by juvenile courts due to family problems. These children are integrated into regular schools. They are counted as 1.5 (instead of 1) to determine the yearly amount of teaching periods for the school.

16. More favourable teacher/pupil ratio in the schools of the capital region of Brussels. Because of the cultural and linguistic differences of pupils going to school in the capital region of Brussels (many of them do not speak Dutch), a more favourable teacher/pupil ratio is used compared to schools in Flanders.

17. Additional resources for schools in some municipalities around the capital region of Brussels and at the linguistic border between the Flemish and the Walloon regions. In six municipalities around the capital region of Brussels and the linguistic border between the Flemish and the Walloon regions schools can receive additional resources. These additional resources are project based (based on a work plan for the pupils with cultural and linguistic differences).

18. Equal educational opportunities. Since the 1900s the Flemish authorities have been encouraging schools to guarantee equal educational opportunities for all children. Schools were granted extra funds, supervision and support for this. For example, projects focusing on educational priority, extending special needs provisions, particular needs, gypsies and travellers were set up. However, all these projects had a temporary character. On 1 September 2002, all of them were replaced by a single integrated range of support provision focusing on children from deprived backgrounds (see programme: Equal opportunities for every child). The aim is to give all children the best opportunities to learn and develop, and at the same time to combat exclusion, social divisions and discrimination. The Act on Equal Education Opportunities has three main aspects: 1. the right of parents to enrol their children in a school of their choice. The reasons for refusing a child or referring it to another schools are very limited; 2. The creation of local consultative bodies which help to implement the equal opportunities policy locally and of a commission on pupils' rights.

19. Additional resources in primary education. Children in regular pre-primary and primary education who live in a Centre for Child Care and Family Support or at a hostel for children whose parents do not have a permanent address or children placed there by a juvenile court or by a youth welfare committee have a coefficient of 1.5 when determining the school's operating budget and staff.

Belgium (French Community)

Cross-national category A

1. Mild mental retardation – Type 1. Type 1 teaching is offered to students with mild mental retardation at primary and secondary level: they receive basic education and technical and vocational education allowing integration in a social and professional environment.

2. Moderate or profound mental retardation – Type 2. Type 2 teaching is offered to children with moderate or profound mental retardation. Depending on the level of the handicap, it prepares students for integration into a protected socio-professional environment or to be occupied in specific activities. This type of teaching is available at pre-primary, primary and secondary levels.

4. Physical deficiencies – Type 4. Type 4 teaching is offered to students with physical handicaps. These students cannot attend regular classes because of medical, paramedical or material needs. This type of teaching is available at pre-primary, primary and secondary levels.

5. Students suffering from an illness – Type 5. This type of teaching enables children suffering from an illness who are in hospital or at a medical pedagogic institute to continue their schooling. It is available at pre-primary, primary and secondary levels.

6. Visual deficiencies – Type 6. This type is offered to children at pre-primary, primary and secondary levels.

7. Hearing impairment – Type 7. This type is offered to children at pre-primary, primary and secondary levels.

Cross-national category B

3. Character and/or personality disorders. Type 3 teaching is offered at pre-primary, primary and secondary levels.

8. Instrumental disorders – Type 8. This type is only available at primary level for students with learning disabilities in language, reading, writing and/or arithmetic.

Cross-national category C

9. Children placed in a home by a judge or under the jurisdiction of juvenile courts. The children are placed in a home by juvenile courts because of problems in their family. They are schooled in normal institutions.

10. Children attending positive discrimination schools. The difficulties in the social or school environment of children as well as the framework for support in schools have led policy makers to launch a programme of "positive discrimination". It consists in effect of voluntary actions, aiming in the name of solidarity to give more to those who have less, based on the principle that it is inequitable to treat very different situations in the same way. It is a matter of distinguishing the institutions with a proportion of students living in areas with standards of living inferior to the national average in terms of socio-economic status. The selected institutions must promote educational actions aiming at giving all students equal chances for social emancipation. Each institution benefiting from positive discrimination policies receives additional human and material resources.

11. New arrivals in schools. Children aged from 2 1/2 to 18 can benefit from new provision created by the decree of June 2001, if they receive stateless or refugee status being nationals of certain developing countries or having arrived in the country less than a year in advance. These students go into "bridge" classes for periods varying from one week to six months during which they benefit from a specific teaching framework enabling them to adapt to the socio-economic and school systems of the country and to be directed towards the level and orientation most appropriate for them.

12. Differentiated teaching for rural areas. Secondary schools located in rural areas with few inhabitants and far from a similar institution have a more favourable teacher/student ratio.

Canada – Alberta

Cross-national Category A

1. Severe mental disability. A student with a severe mental disability (Code 41) is one who: *a)* has severe delays in all or most areas of development; *b)* frequently has other disabilities including physical, sensory, medical, and/or behavioural; *c)* requires constant assistance and/or supervision in all areas of functioning, including daily living skills, and may require assistive technology; *d)* should have a standardised assessment that indicates functioning in the severe to profound range (standardised score of 30 + or – 5 or less). Functional assessments by a qualified professional will also be considered in cases where the disabilities of the child preclude standard assessments; and/or *e)* has scores equivalent to the severe to profound levels on an adaptive behaviour scale (*e.g.*, American Association on Mental Deficiency Adaptive Behaviour Scale: Progress Assessment Chart, Vineland).

3. Severe multiple disability. A student (ECS to Grade 12) with a severe multiple disability (Code 43) is one who: *a)* has two or more non associated moderate to severe mental and/or physical disabilities that, in combination, result in the student functioning at a severe to profound level; and *b)* requires special programs, resources, and/or therapeutic services. Students with a severe disability with a second disabling condition should be identified under the category of the primary severe disability. A student with a severe mental disability and another associated disability is not designated under this category, but is designated under severe emotional/behavioural disability. The following mild/moderate disabilities cannot be used in combination with other disabilities to qualify under code 43: *a)* ADD/HD; *b)* learning disability; *c)* emotional behavioural disabilities; and *d)* speech and language related disabilities.

4. Severe physical or medical disability (Code 44). A student with a severe physical, medical, or neurological disability (Code 44) is one who has a medical diagnosis of a physical disability, specific neurological disorder, or medical condition that creates a significant impact on the student's ability to function in the school environment (note: some physical or medical disabilities have little or no impact upon the student's ability to function in the school environment) and requires extensive personal assistance and modifications to the learning environment in order to benefit from schooling. A student with severe autism or other severe pervasive developmental disorder is included in this category. A clinical diagnosis by a psychiatrist, clinical psychologist, chartered psychologist, or medical professional specialising in the field of autism is required. A clinical diagnosis of autism is not necessarily sufficient in order to qualify under this category. Eligibility is determined by the functioning level of the student with autism. In order for a diagnosis of autism to be made, the student needs to demonstrate difficulties in three broad areas: 1) social interaction; 2) communication; and 3) stereotyped pattern of behaviour (*i.e.* hand flapping, body rocking, echolalia, insistence on sameness, and resistance to change). A student diagnosed with severe Foetal Alcohol Syndrome (FAS) or Foetal Alcohol Effects (FAE), including Alcohol Related Neurodevelopmental Disorder (ARND) is included in this category. A clinical diagnosis by a psychiatrist, clinical psychologist with specialised training, or medical professional specialising in developmental disorders is required. A clinical diagnosis of FAS/FAE is not necessarily sufficient to qualify under this category. Eligibility is determined by the functioning level of the student with FAS/FAE. Students with severe FAS/FAE exhibit significant impairment in many of the following areas: *a)* social functioning; *b)* life skills; *c)* behaviour; *d)* learning; and *e)* attention and concentration resulting in the need for extensive intervention and support.

5. Deafness (Code 45). A student with a profound hearing loss (Code 45) is one who: 1) has a hearing loss of 71 decibels (dB) or more unaided in the better ear over the normal speech range (500 and 4 000 Hz) that interferes with the use of oral language as the primary form of communication; or 2) has a cochlear implant preceded by a 71 dB hearing loss unaided in the better ear; and 3) requires extensive modifications and specialised educational supports; and 4) has a diagnosis by a clinical or educational audiologists. New approvals require an audiogram within the past three years.

Canada – Alberta *(cont.)*

6. Blindness (Code 46). A student with a severe visual impairment (Code 46) is one who: 1) has corrected vision so limited that it is inadequate for most or all instructional situations, and information must be presented through other means; 2) has a visual acuity ranging from 6/60 (20/200) in the better eye after correction, to having no usable vision or field of vision reduced to an angle of 20 degrees; and 3) has a severe to profound visual impairment that has not changed significantly since the initial approval by Alberta Learning. Documentation from a qualified specialist in the field of vision outlining the severity of the disability and modifications to the learning environment may be sufficient to support eligibility. For those students who may be difficult to assess (*e.g.*, cortical blindness developmentally delayed), a functional visual assessment by a qualified specialist in the field of vision or a medical professional may be sufficient to support eligibility. NB: This definition also applies to blindness.

7. Severe communications disorder (Code 47; ECS only). A child with a severe communication disability (Code 47, ECS children only) has severe difficulty in communication with peers and/or adults because of a severe disability in expressive and/or receptive language and/or total language. This may include little, if any, expressive or receptive communication skills. In order to qualify for severe communication disability funding, the assessment results must be less than or equal to the first percentile. One subset score alone, such as sentence structure or word structure at or below the first percentile, does not qualify as a severe communication disability for funding purposes. If a child has a moderate to severe disability in a non associated category (in addition to having a moderate to severe communication disability), then the child would be more appropriately identified as Severe Multiple Disability (Code 43). This applies only to eligible ECS children and does not apply for children in Grades 1-12. A severe phonological delay does not necessarily qualify as a severe communication disability. A current speech and language assessment report must be submitted with the application for funding. The speech language report should include a conclusion or summary statement that clearly indicates the level of communication disability (*i.e.,* mild, moderate, severe, or profound). Recommended assessment instruments would be phonological, such as the Hudson, rather than articulation tests. Documentation that clarifies the level of intelligibility and the impact of the speech language disorder on the child's ability to function in an education environment should also be included.

8. Mild mental disability (Code 51). A student with a mild mental disability (Code 51) is usually delayed in most academic subjects and social behaviours as compared to his or her own same age peers. Any student designated as having a mild mental disability should have an IQ in the range of 50-75 + or – 5 as measured on an individual intelligence test, have an adaptive behaviour score equivalent to the mildly delayed level on an adaptive behaviour scale (*e.g.* American Association on Mental Deficiency Adaptive Behaviour Scale; Progress Assessment Chart, Vineland) and exhibit developmental delays in social behaviours.

9. Moderate mental disability (Code 52). A student with a moderate mental disability (Code 52) requires significant modification to basic curriculum but is able to profit from instruction in living/vocational skills and may require functional literacy and numeracy skills. Any student who is designated as having a moderate mental disability should have an IQ in the range of approximately 30-50 + or – 5 as measured on an individual intelligence test and have an adaptive behaviour score equivalent to the moderately delayed level on an adaptive behaviour scale (*e.g.*, American Association on Mental Deficiency Adaptive Behaviour Scale; Progress Assessment Chart, Vineland).

12. Mild/moderate hearing disability (Code 55). A student with a mild/moderate hearing disability (Code 55) is one whose hearing condition affects speech and language development and interferes with the ability to learn. A student with a mild (26 to 40 decibels) to moderate (41 to 70 decibels) hearing disability will have an average hearing loss of 26 to 70 decibels unaided in the better ear over the normal range of speech. The normal range of speech is between 500 Hz and 4 000 Hz.

Canada – Alberta *(cont.)*

13. Mild/Moderate Visual Disability (Code 56). A student with a mild/moderate visual disability (Code 56) is one whose vision is so limited that it interferes with the student's ability to learn or the student requires modification of the learning environment to be able to learn. A student who is designated as having limited vision should have a visual acuity of less than 20/70 (6/21 metric) in the better eye after correction and/or a reduced field of vision.

14. Mild/moderate communication disability (Code 57). A student with a mild/moderate communications disability (Code 57) has significant difficulty in communicating with peers and adults because of a disability in expressive and/or receptive language and/or disabilities in speech including articulation, voice, and fluency.

15. Mild/moderate physical/medical disability (Code 58). A student with a mild to moderate physical or medical disability (Code 58) is one whose physical, neurological, or medical condition interferes with the ability to learn or who requires a modification of the learning environment in order to learn. The existence of a physical disability or medical condition, in and of itself, is not sufficient for the student to be designated under this category; the condition must impact upon the student's schooling.

16. Mild/moderate multiple disability *(Code 59)*. A student with a mild to moderate multiple disability (Code 59) has two or more non associated mild/to moderate disabilities that have a significant impact upon his or her ability to learn. Some disabling conditions are closely associated and so would not be designated under this category. For example, students with hearing disabilities frequently have communication disabilities and students with mental disabilities almost always have both academic and communication disabilities.

Cross National Category B

2. Severe emotional/behavioural disability. A student with a severe emotional/behavioural disorder (Code 42) is one who: *a)* displays chronic, extreme, and pervasive behaviours that require close and constant adult supervision, high levels of structure, and other intensive support services in order to function in an educational setting. The behaviours significantly interfere with both the learning and safety of the student and other students; *b)* has a diagnosis of psychosis including schizophrenia, bi polar disorder, obsessive/compulsive disorders, or severe chronic clinical depression; *c)* displays self-stimulation, self-abusive or aphasic behaviour; or *d)* is dangerously aggressive, destructive, and has violent and impulsive behaviours toward self and/or others such as Conduct Disorder. In the most extreme and pervasive instances, severe Oppositional Defiance Disorder may qualify. A clinical diagnosis within the last two years by a psychiatrist, chartered psychologist, or a developmental paediatrician is required in addition to extensive documentation of the nature, frequency, and severity of the disorder by school authorities. The effects of the disability on the student's functioning in an educational setting should be described. An ongoing treatment plan/behavioural plan should be available and efforts be made to ensure that the student has access to appropriate mental health and therapeutic services. A clinical diagnosis of a behavioural disorder is not necessarily sufficient to qualify under this category. Some diagnoses not sufficiently severe enough to qualify include attention deficit/hyperactivity disorder (AD/HD) and attention deficit disorder (ADD).

10. Mild/moderate emotional/behavioural disability (Code 53). Students with a mild/moderate emotional/behavioural disability (Code 53) exhibit chronic and pervasive behaviours that are so maladaptive that they interfere with the learning and safety of the student and other students. Behaviour disabilities are characterised by a number of observable maladaptive behaviours: 1) an inability to establish or maintain satisfactory relationships with peers or adults; 2) a general mood of unhappiness or depression; 3) continued difficulty in coping with the learning situation in spite of remedial intervention; 4) physical symptoms or fears associated with personal or school problems; 5) difficulties in accepting the realities of personal responsibility and accountability; and 6) physical violence toward other persons and/or physical destructiveness toward the environment.

Canada – Alberta *(cont.)*

11. Learning disability (Code 54). Students with a mild/moderate learning disability (Code 54) usually have average or above average intelligence but have specific learning disabilities that interfere with normal academic learning. Learning disabilities is a generic term that refers to a heterogeneous group of disorders due to identifiable or inferred central nervous system dysfunction. Such disorders may be manifested by delays in early development and/or difficulties in any of the following areas: attention, memory, reasoning, co-ordination, communicating, reading, writing, spelling, calculation, social competence, and emotional maturation. Learning disabilities are intrinsic to the individual and may affect learning and behaviour in any individual, including those with potentially average or above average intelligence. Learning disabilities are not due primarily to visual, hearing, or motor handicaps, to mental retardation, emotional disturbance, or environmental disadvantage, although they may occur concurrently with any of these. Learning disabilities may arise from genetic variations, biochemical factors, events in the pre to perinatal period, or any other subsequent events resulting in neurological impairment. Learning disabilities are intrinsic to the individual and may affect learning and behaviour in any individual, including those with potentially average or above average intelligence. Learning disabilities are not due primarily to visual, hearing, or motor handicaps, to mental retardation, emotional disturbance, or environmental disadvantage, although they may occur concurrently with any of these. Learning disabilities may arise from genetic variations, biochemical factors, events in the pre to perinatal period, or any other subsequent events resulting in neurological impairment.

17. Gifted and talented (Code 80). A student in Grade 1 12 who is gifted and talented (Code 80) is one who, by virtue of outstanding ability, is capable of exceptional performance. This is a student who requires differentiated provisions and/or programs beyond the regular school program to realise his or her contribution to self and society. A student capable of exceptional performance is one who demonstrates achievement and/or potential ability in one of several areas: 1) General intellectual ability. A student possessing general intellectual ability is consistently superior to the other students in the school to the extent that the student needs and can profit from specially planned educational services beyond those normally provided by the regular school program. Usually, this is the student who has a large storehouse of information about a wide variety of topics. The ability to abstract, generalise, and use high level thinking skills is common in this type of student. 2) Specific academic aptitude. A student possessing a specific academic aptitude is the student who, in a specific subject area, is consistently superior to the aptitudes of the other students in the school to the extent that the student needs and can profit from specially planned educational services beyond those normally provided by the regular school program. Generally, this is the student who has an inordinate strength in a specific area, such as mathematical reasoning. 3) Creative or productive thinking. A student who thinks creatively or productively is one who consistently engages in divergent thinking that results in unconventional responses to conventional tasks, to the extent that the student needs and can profit from specially planned educational services beyond those normally provided by the regular school program. Generally, this is the student who is unwilling to accept authoritarian pronouncements without critical examination. 4) Leadership ability. A student possessing leadership ability is one who not only assumes leadership roles, but also is accepted by others as a leader, to the extent that the student needs and can benefit from specially planned educational services beyond those normally provided by the regular school program. Generally, this is the student who can be counted upon to carry out responsibilities and adapts readily to new situations. 5) Visual and performing arts. A student possessing visual and performing arts ability is one who consistently creates outstanding aesthetic productions in graphic areas, sculpture, music, drama, or dance, to the extent that this student needs and can benefit from specially planned educational activities beyond those normally provided in the regular school program. 6) Psychomotor ability. A student possessing psychomotor ability is one who consistently displays mechanical skills or athletic ability so superior to that of other students in the school that the student needs and can profit from specially planned educational services beyond those normally provided by the regular school program. Generally, this is the student with good control of body movement and excellent hand eye co-ordination.

Canada – British Columbia

Cross-national Category A

1. Visual impairments. Visual impairment includes the following categories: blind, legally blind, partially sighted, low vision, and cortically visually impaired. A student with visual impairment is one whose visual acuity is not sufficient for the student to participate with ease in everyday activities. The impairment interferes with optimal learning and achievement and can result in a substantial educational disadvantage unless adaptations are made in the methods of presenting learning opportunities, the nature of the materials used and/or the learning environment. It is not intended to include students described as having visual perceptual difficulties unless they also have a vision loss as described below. To be eligible for supplemental funding as a visually impaired student, the following conditions must be met: a current IEP describing a visual acuity of 6/21 (20/70) or less in the better eye after correction; a visual field of 20 degrees or less; any progressive eye disease with a prognosis of becoming one of the above in the next few years; or a visual problem or related visual stamina that is not correctable and that results in the student functioning as if his or her visual acuity is limited to 6/21 (20/70) or less.

3. Deaf/Blindness. A student with deaf blindness has a degree of visual and auditory impairment which, when compounded, results in significant difficulties in developing communicative, educational, vocational and social skills. To be considered deaf blind the student's vision and auditory impairments can range from partial sight to total blindness, and from moderate to profound hearing loss. Students who are identified and assessed as deaf blind are eligible for supplemental funding as students with multiple disabilities when the following conditions are met: a current IEP must be in place; and direct, ongoing special education service(s) must be provided. These services should be outlined in the IEP and directly related to the student's identified special need(s). The special education service(s) must be in addition to any services provided under formula funding based on total student enrolment (*e.g.* learning assistance, counselling). Reduction in class size is not by itself a sufficient service to meet the definition.

4. Multiple disabilities. A student with dependent needs is completely dependent on others for meeting all major daily living needs. She/he will require assistance at all times for feeding, dressing, toileting, mobility and personal hygiene. Without such assistance and personal care support, attendance at school would not be possible. Many students may also require health care as defined in the Inter Ministerial Protocols. The estimated prevalence among school age students requiring this very intense level of service is 0.07% of the student population. Some students are born with conditions or disabilities that make them dependent, while others acquire conditions or disabilities. For some students, increasing independence as they learn and grow is a reasonable expectation. For other students, decreasing independence may occur due to degenerative conditions or terminal illness (see other multiple disability category: deaf/blind).

5. Hearing impairments. For educational purposes, a student considered to be deaf or hard of hearing is one who has a medically diagnosed hearing loss which results in such a substantial educational difficulty that he/she requires direct services on a regular, frequent and ongoing basis by a qualified teacher of the deaf and hard of hearing. Students with a diagnosis of central auditory processing dysfunction are not traditionally served by teachers of the deaf and hard of hearing unless there is an additional diagnosis of peripheral hearing loss. To be eligible for supplemental funding as a deaf or hard of hearing student, the following conditions must be met: a medical diagnosis of hearing loss has been made; and a current IEP must be in place; and the student must be receiving special education services that are directly related to the student's hearing loss on a regular, frequent and on going basis from a qualified teacher of the deaf and hard of hearing.

6. Autism. The syndrome of autism is a condition characterised by a marked disorder of communication and a severe disturbance of intellectual, emotional and behavioural development. It is a syndrome defined and diagnosed through the observation of behaviours. The syndrome is caused by an underlying physical dysfunction within the brain or central nervous system, the exact nature of which is, as yet, unknown. The Ministry of Education uses the definition of autism as defined by the American Psychiatric Association: a student with autism exhibits impairment in: reciprocal social interaction; verbal and non verbal communication; imaginative activity; and restrictive, repetitive and stereotyped patterns of behaviour, interest and activities. To be eligible for supplemental funding, the following conditions must be met: a diagnosis of autism must have been made by appropriately qualified professionals; and a current IEP must be in place; and the student must be receiving additional special education services directly related to the autism on an ongoing and frequent basis. Reduction in class size is not by itself sufficient to meet the definition.

Canada – British Columbia *(cont.)*

8. Moderate to severe to profound intellectual disabilities. A student is considered to have a moderate to severe/profound intellectual disability if intellectual functioning is greater than three standard deviations below the norm on an individually administered Level C assessment instrument of intellectual functioning, and there is delayed adaptive behaviour and functioning of similar degree. As individuals and as a group, these students have particular learning characteristics. They require support in the development of communication skills, cognitive skills, fine and gross motor skills, self-care, life skills and socialisation skills. Generally, a student with this level of intellectual functioning is also significantly delayed in social emotional development. There may also be accompanying sensory, physical and health disabilities. Specific instruction is needed for many or all life skills activities.

10. Severe behaviour disorders. Students with severe behaviour disorders who are eligible to be claimed in this funding category are those who exhibit: either antisocial, extremely disruptive behaviour in the school environment and in most other environments, consistently/persistently over time; or severe mental health conditions which manifest themselves in profound withdrawal or other internalising behaviours. These students generally have histories of profound problems, and present as very vulnerable, fragile students who are seriously 'at risk' in classroom situations without extensive support. These students must also exhibit behaviours which are serious enough to be known to school and school district personnel and other community agencies and to warrant intensive interventions by other community agencies beyond the school; and a serious risk to themselves or others, and/or with behaviours that significantly interfere with their academic progress and that of other students; and beyond the normal capacity of the school to manage. Students in this category should be recognised as those most in need from a community perspective, and should have access to intensive, co-ordinated school/community intervention. These interventions should be based on co-ordinated, inter ministerial assessment planning and intervention processes which are required to manage and maintain the students in school and in their community. Students are eligible in this funding category only if the school district can demonstrate that it is incurring extraordinary costs related to delivering the students' educational programs. Reduction in class size is not by itself a sufficient service to meet the definition.

14. Physical disabilities or chronic health impairments. A student is considered to have a physical disability or chronic health impairment based on the need for special educational services due to one or more of the following: nervous system impairment; musculoskeletal condition; and/or chronic health impairment. Medical diagnosis, by itself, does not determine the special educational services required by students with physical disabilities or chronic health impairments. Students are only eligible for funding in this category if their education is adversely affected by their physical disabilities or chronic health impairments. To be eligible for supplemental funding for a student in this category, the following conditions must be met: the student must meet one or more of the above criteria; and a current IEP must be in place; and direct, ongoing special education service(s) must be provided. These services should be outlined in the IEP and directly related to the student's identified special need(s). The special education service(s) must be in addition to any services provided under formula funding based on total student enrolment (*e.g.,* learning assistance, counselling). Reduction in class size is not by itself a sufficient service to meet the definition.

Cross-national Category B

2. Specific learning disabilities. A group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning or mathematical abilities, which are intrinsic to the individual, presumed to be due to central nervous system dysfunction, and may occur across the life span. Problems in self-regulatory behaviours, social perception and social interaction may exist with learning disabilities but do not by themselves constitute a learning disability. Although learning disabilities may occur concomitantly with other handicapping conditions (*e.g.* sensory impairment, mental retardation, serious emotional disturbance) or with extrinsic influences (*e.g.* cultural differences, insufficient or inappropriate instruction), they are not the result of those conditions or influences and may

Canada – British Columbia *(cont.)*

include conditions described as dyslexia, dyscalculia or dysgraphia, and students with Attention Deficit/ Hyperactivity Disorder (AD/HD). To be eligible for supplemental funding for Severe Learning Disabilities, a student must also meet the following criteria: Severe difficulties in the acquisition of basic academic skills and/or school performance persist after classroom based remedial interventions, curricular adaptations and learning assistance support. Persistent difficulties in the acquisition of pre-Academic skills such as recognition of letters and numbers in the early primary years; and/or persistent difficulties in the acquisition of reading, writing and/or arithmetic skills in the later primary years; and/or a discrepancy of two standard deviations between estimated learning potential and academic achievement as measured by norm referenced instruments in Grades 3-12; and a significant weakness in one or more cognitive processes (*e.g.* perception, memory, attention, receptive or expressive language abilities, visual spatial abilities) relative to overall intellectual functioning, as measured by norm referenced assessment instruments, which directly impact learning and school performance.

7. Mild intellectual disabilities. A student is considered to have a mild intellectual disability if intellectual functioning is 2.01 to 3.00 standard deviations below the norm on an individually administered Level C assessment instrument of intellectual functioning, and there is delayed adaptive behaviour and functioning of similar degree. While individual needs will differ, many students with mild intellectual disabilities may require specific instruction for the acquisition of gross and fine motor skills, communication skills, assistance with development of social skills, including personal independence, social responsibility and life skills, as well as with reasoning skills, memory, problem solving and conceptualising skills.

9. Mild to moderate behaviour disorders, including rehabilitation. Students with mild/moderate behavioural difficulties demonstrate one or more of the following: behaviours such as aggression (of a physical, emotional or sexual nature) and/or hyperactivity; negative or undesirable internalised psychological states such as anxiety, stress related disorders, and depression; behaviours related to social problems such as delinquency, substance abuse, child abuse or neglect; and/or behaviours related to other disabling conditions, such as thought disorders or neurological or physiological conditions; and the frequency or severity of the above behaviours have a very disruptive effect on the classroom learning environment, social relations or personal adjustment; and they demonstrate the above behaviour(s) over an extended period of time, in more than one setting and with more than one person (teachers, peers); and they have not responded to support/interventions provided through usual classroom management strategies. Rehabilitation programs are jointly funded by the Ministry of Social Services and the Ministry of Education. Students can be included in the rehabilitation funding category when, through the assessment process, it has been determined that they meet all of the criteria for students with moderate behaviour disorders, there is funding for the program from the Ministry of Social Services, and a current IEP is in place.

11. Gifted. A student is considered gifted when she/he possesses demonstrated or potential abilities that give evidence of exceptionally high capability with respect to intellect, creativity, or the skills associated with specific disciplines. Students who are gifted often demonstrate outstanding abilities in more than one area. They may demonstrate extraordinary intensity of focus in their particular areas of talent or interest. However, they may also have accompanying disabilities and should not be expected to have strengths in all areas of intellectual functioning. These students must be appropriately identified and be receiving an additional special educational service on a regular and ongoing basis to be eligible for special education funding in this category. Current funding allows for up to 2% of total student enrolment for supplemental funding in this category if supplemental services are provided to identified students on a regular basis, and a current Individual Education Plan is in place. Reduction in class size is not by itself a sufficient service to meet the definition.

12. Learning assistance. Learning assistance services are school based, non categorical resource services designed to support classroom teachers and their students who have mild to moderate difficulties in learning and adjustment.

Canada – British Columbia *(cont.)*

Cross-national Category C

13. English as a second language. Learning another language and new cultural norms, adjusting to a different social and physical setting, or overcoming homesickness or trauma can affect a student's school adjustment and learning. These factors, when combined with a disability or impairment, can significantly undermine school achievement. Assessing and planning for students with special needs becomes more complex when language, cultural or migration factors are involved. Except for cases of obvious disability (*e.g.* profound intellectual disability, physical or sensory disability), teachers should fully consider cultural, linguistic and/or experiential factors that can affect learning before assuming the presence of a disability or impairment. Consideration should be given to prior educational experience, and the student should be allowed sufficient time for second language learning and social adjustment. Students may need additional support for language development, and academic upgrading (*e.g.* math), or assistance with social integration, without necessarily presenting a disability.

15. Aboriginal education program. Students who self-report that they are of Aboriginal ancestry are eligible for an Aboriginal Language and Culture Program that leads to knowledge, understanding and fluency in a student's heritage language and culture; including support services to assist such as home school co-ordination, elder peer community counselling; or aboriginal tutorial assistance. This support is in addition to any special education or learning assistance.

Canada – New Brunswick

Cross-national category A

2. Communicational. Students who require support because of deficits in speech/articulation development and language.

3. Intellectual. Students who may require modified or long term intensive special educational programmes or services to develop their academic and social potential.

4. Physical. Medical/health; physically handicapped students who, because of physically challenging conditions, require mobility assistance or adaptation to the physical environment and/or personal care. These include hearing and visually impaired students who received services from APSEA (Atlantic Provinces Special Education Authority).

5. Perceptual. Students who because of specific learning disabilities continue to experience a wide range of difficulties in coping in the regular classroom environment.

6. Multiple. Students who have combinations of challenging disabilities.

Cross-national category B

1. Behavioural exceptionalities. Students with severe behavioural challenges that are primarily a result of social, psychological and environmental factors.

Cross-national category C

7. Immigrant. Students who receive tutorial funding to acquire skills in English language.

Canada – Saskatchewan

Cross-national Category A

1. Intellectual disabilities. Regulation 49c: "Trainable mentally retarded, that is when a pupil has: *i)* an intelligence quotient below 50 plus 5, as measured by an approved individual test: and *ii)* a significant deficit in adaptive behaviour, as measured by an approved individual test or confirmed by an observer who is, in the opinion of the minister, competent." Regulation 49 is currently under review and the following definition is under consideration: "A pupil has a mental disability when an individual who is acceptable to the minister and who is qualified to conduct individual psychological assessments certifies that the pupil: *a)* scored at least three standard deviations below the mean on an individual standardised test of mental ability, and *b)* demonstrates a deficit in adaptive behaviour, as measured by an individual measure of adaptive behaviour."

2. Visual impairments. Regulation 48a: "Visually impaired, that is when assessment by a certified practitioner acceptable to the minister affirms that visual acuity is 20/200 or less in the pupil's better eye with proper correction or that the pupil's field of vision is so limited that the widest diameter of the visual field subtends to an angle of 20 degrees or less." Regulation 48 is under review and the following definition is under consideration: "A pupil has a visual disability if a duly qualified medical practitioner certifies that the pupil: *a)* has a measured loss of central visual acuity that may vary from blindness to 20/70 or less in the better eye with correction, or *b)* has a field of vision no greater than 20 degrees at the widest diameter."

4. Orthopaedic impairments. Regulation 49e: "Orthopaedically disabled, that is when assessment by a duly qualified medical practitioner certifies that the pupil's physical limitations adversely affect his educational performance, seriously restrict his mobility within the school, seriously limit self help activities or limit his use of conventional transportation to the extent that special education services are required." Regulation 49 is currently under review and the following definition is under consideration: "A pupil has an orthopaedic disability when a duly qualified medical practitioner certifies that the pupil has an identified physical condition that: *a)* adversely affects the pupil's educational performance, *b)* seriously restricts the pupil's mobility within the school learning environment, *c)* seriously limits the pupil's self-help activities, *d)* limits the pupil's use of conventional transportation, or *e)* requires specialised technological aids."

5. Chronically ill. Regulation 49f: "Chronically health impaired, that is when assessment by a duly qualified medical practitioner certifies that the pupil's physical health: 1) does not permit school attendance and that hospital or home placement is required for at least three months, or 2) adversely affects his educational performance at school to the extent that ongoing special education services are required." Regulation 49 is currently under review and the following definition is under consideration: "A pupil has a chronic medical condition if, following assessment, a duly qualified practitioner certifies that *a)* the pupil requires medical procedures, excluding the administration of medication, to ensure the health and safety of the pupil while in school, or *b)* that the pupil's attendance will be limited due to ongoing medical interventions, or *c)* that the pupil's school attendance will be limited because the condition adversely affects the pupil's health, or *d)* the pupil's educational performance will be adversely affected by his/her medical condition."

7. Multiple disabilities. Regulation 49h: "Severely multiply disabled, that is when medical and psychological assessment acceptable to the minister affirms that the pupil has severe concomitant disabilities of the types described in clauses *a)* to *g)*." Regulation 49 is under review and the following definition is under consideration: "A pupil has a multiple disability when an assessment by an individual, acceptable to the minister, confirms that the pupil has concomitant recognised disabilities of the types described in this section."

8. Deaf or hard of hearing. Regulation 49b: "Hearing impaired, that is when audiological assessment by a provincial assessment service acceptable to the minister affirms that the pupil's decibel loss in the speech range is greater than 34 decibels in both ears." Regulation 49 is under review and the following is under consideration: "A pupil is deaf or hearing impaired when an audiological assessment by a qualified person acceptable to the minister certifies that the pupil has: *a)* a hearing loss in which the unaided average of the three most severe of the following frequencies, 250, 500, 1 000, 2 000, 4 000, mH is greater than 34 decibels in the better ear; or *b)* a unilateral loss in which the unaided difference between the affected and unaffected ear is 50 decibels or more and there is a significant delay in speech or language development."

Canada – Saskatchewan *(cont.)*

9. Autism. Students with autism spectrum disorder are typically classified as "severely multiple disabled." However, a current resource published for Saskatchewan teachers presents this definition: [Teaching Students With Autism: A Guide for Teachers (1999) Saskatchewan Education, Special Education Unit (ISBN 1 894116 56 9); available at *www.sasked.gov.sk.ca/curr_inst/speced*]. "Autism is a pervasive developmental disorder which is characterised by impairments in communication and social interaction, and restricted, repetitive stereotypic patterns of behaviour, interests and activities (American Psychiatric Association (APA), 1994). It is a complex neurological disorder that affects the functioning of the brain."

10. Traumatic brain injury. Students with acquired brain injury are not classified separately. Depending on the degree of disability, they are accounted for in either "chronically health impaired" or "severely multiple disabled classifications."

Cross-national Category B

3. Social, emotional or behavioural disorder. Regulation 49g: "Socially, emotionally or behaviourally disabled, that is when a thorough diagnostic study by medical and educational personnel affirms that the pupil exhibits excessive, chronic deviant behaviour which adversely affects educational performance."

6. Learning disabilities. Regulation 49d: In Division 1 to 4 and is severely learning disabled, that is when assessment by a qualified personnel acceptable to the minister affirms that: 1) the pupil has an intelligence quotient of 85 or higher, as measured by an approved individual test; 2) there is a significant discrepancy, one standard deviation or greater, between aptitude and achievement; and 3) the pupil's average rate of progress in the skills subjects, including reading, is not greater than half that of average pupils as measured by an approved individual test.

Chile

Cross-national category A

1. Mental deficiency. Students with an intelligence quotient (IQ) equal to or less than 70, as measured by a test validated by the World Health Organisation. It includes the levels "light or mild"; "moderate and severe or serious".

2. Visual deficit. Students who due to different causes, have qualitative and quantitative limitations in the reception, integration and manipulation of visual information essential to their full development and adaptation to the environment as a result of which they require additional specialised personnel, materials, procedures and methodologies for the development of their potential. Included in this category are students with residual vision of 0.33 or less.

3 Hearing deficit. Students with different degrees of impairment of the auditory sensory perception characterised by quantitative and qualitative limitations in the reception, integration and manipulation of auditory information essential for their development and adaptation. Included in this category are students with a hearing loss equal to or higher than 40 decibels.

4. Motor deficit or disorder. Motor deficiencies caused by impairments in the musculoskeletal or nervous system.

5. Serious social and communication impairments. *a)* Persons with autistic disorders: syndrome characterised by a global developmental disorder and that manifests itself almost always during the first 36 months of age. *b)*. Persons with serious affective, intellectual and/or behavioural disorders and/or deficits. *c)* Persons with severe dysphasia: children with impairments in basic language comprehension and production that affects their communication with their environment but with no affective impairment. This disorder manifests itself at around 24 months of age.

Chile *(cont.)*

Cross-national category B

6. Oral communication disorders. Students with primary, secondary or acquired communication, speech and developmental disorders: *a)* Primary disorder *b)* Secondary – acquired and developmental – disorder *c)* Speech disorder: pathological dyslalia. These pathologies are associated with serious difficulties in the production, comprehension and use of language.

Cross-national category C

7. Recipients of social benefits JUNAEB. Students (children and young people) in vulnerable conditions that attend municipal educational establishments or top priority individuals funded for being particularly vulnerable, according to the System of Personalised Selection and Prioritisation (SINAE – Sistema de Selección y Priorización Personalizada) applied for the allocation of food portions by the National Union for School Support and Bursaries (JUNAEB – Junta Nacional de Auxilio Escolar y Becas). These students also receive support from various programmes whose aim is to level out their social disadvantages that affect negatively the normal course of their educational development. These include: Programme for School Nutrition, Programme for Comprehensive Support (bursaries for continuation of studies), Programme for School Health, Programme for Psychosocial Health and School Tools. This group consists of approximately 600 000 students, and includes the beneficiaries of the social protection system Chile Solidario, indigenous students living in urban areas and students living in poverty in rural areas who do not receive benefits from Chile Solidario.

Czech Republic

Cross-national category A

1. Mentally retarded. All students in the educational system with mental handicaps (in special schools, special classes, regular schools) who need reduced education or special educational plans. Children with serious mental handicaps in auxiliary schools, educated according to very reduced educational plans are also included in this category.

2. Hearing handicaps. Students with all types of hearing handicaps – deaf, partially hearing, etc. – who need special educational approaches (in special schools, special classes, and regular schools).

3. Sight handicaps. Students with all types of sight handicaps – blind, partially sighted, etc. – who need special educational approaches (in special schools, special classes, and regular schools).

4. Speech handicaps. Students with all types of speech handicaps who need special educational approaches (in special schools, special classes, regular schools).

5. Physical handicaps. Students with all types of physical handicaps who need special educational approaches (in special schools, special classes, regular schools).

6. Multiple handicaps. Students with all combinations of handicaps who need special educational approaches.

7. Students in hospitals. Hospitalised students, students attending school in hospitals and students in medical institutions.

9. Other handicaps. All other handicapped students (not defined in the other categories).

10. Children with poor health (pre-primary only). Children in poor health at pre-primary level who need special educational approaches.

12. Autistic. Autistic children and students (in special schools, special classes, regular classes).

Czech Republic *(cont.)*

Cross-national category B

8. Development, behaviour and learning problems. Students with all types of development, behaviour and learning problems (including dysgraphia, dyslexia, etc.), who need special educational approaches.

Cross national category C

11. Socially disadvantaged children, preparatory classes in regular schools. Children in special classes for socially disadvantaged children in regular schools, students from reformatory educational institutions for children and young people.

Finland

Cross-national category A

1. Mild mental impairment (MIMI). Education for children and young people who need adjustments to the curriculum and extra support (education for students with mild mental impairment). Adjustments may concern all or only some subjects. These students have been transferred to special needs education and an IEP (Individual Education Plan) has to be drawn up for them.

2. Moderate or severe mental impairment. Education for mentally disabled students needing adjustments to the curriculum and extensive support or education with a curriculum based on training for everyday activities. The most severely mentally handicapped students have a curriculum with five function areas: motor skills, language and communication, social skills, daily living skills and cognitive skills. These students have been transferred to special education and an IEP has to be drawn up for them.

3. Hearing impairment (HI). Education of the hearing impaired. Includes deaf and partially hearing students, who have been transferred to special needs education and an IEP has to be drawn up for them.

4. Visual impairment (VI). Education for the visually impaired. Includes blind and partially sighted students, who have been transferred to special needs education and an IEP has to be drawn up for them.

5. Physical and other impairment (POHI). Education of the disabled (physical disabilities, neurological disabilities, developmental disorders). The students have been transferred to special needs education and an IEP has to be drawn up for them.

7. Autism and Asperger's syndrome. Education for students with autism and Asperger's syndrome. Children and young people with a moderate or severe developmental disability based on complex impairments of the central nervous system. The students have been transferred to special education and an IEP has to be drawn up for them.

8. Dysphasia. Dysphasia means special difficulty in language development. It can appear as a difficulty to comprehend and/or to produce speech, as learning problems at school (reading, writing, maths) and it can also be accompanied for example by clumsiness, sensitivity of emotional life, or difficulties in concentration. Students have been transferred to special education and an IEP has to be drawn up for them.

Cross-national category B

6. Emotional or social impairment (EI). Students with serious emotional and/or behavioural problems; they have been transferred to special needs education and an IEP has to be drawn up for them.

9. Other impairment. Metabolic or nutritional disorders including abnormal development and maturation, gluten intolerance, diabetes, epilepsy, malnutrition or other impairments which are not defined in other categories. Education is provided according to the general education curriculum or students are transferred to special education and IEP is drawn up.

Finland *(cont.)*

10. Speech difficulties. Part time special needs education of students with speech difficulties. Students have problems in articulation, fluency, voice and verbalization and there are difficulties in communication and learning. Students belonging to this category follow the regular curriculum.

11. Reading and writing difficulties. Part time special needs education for students with reading and writing difficulties. Students belonging to this category follow the regular curriculum.

12. Learning difficulties in mathematics. Part time special needs education for students with learning difficulties in mathematics. Students belonging to this category follow the regular curriculum.

13. Learning difficulties in foreign languages. Part time special needs education for students with learning difficulties in foreign languages. Students belonging to this category follow the regular curriculum.

14. Emotional and social difficulties. Part time special needs education for maladjusted students. Children and young people with behavioural and conduct difficulties and/or emotional difficulties. Students belonging to this category follow the regular curriculum.

Cross-national category B

15. Other special difficulties. Part time special needs education for students with difficulties not defined in other categories. Students belonging to this category follow the regular curriculum.

17. Remedial teaching. Temporary part time teaching usually provided by a general education teacher for students who have temporarily fallen behind in their studies or who need other special support. Students belonging to this category follow the regular curriculum.

18. Teaching in hospitals. Children or young people being treated in clinics or hospitals and who are capable of taking part in lessons and students with chronic illnesses who cannot attend regular schools. Education is provided according to the general education curriculum.

Cross-national category C

16. Remedial teaching for immigrants and different cultural groups. Periodic part time remedial teaching for students who have moved to Finland from abroad; mother tongue teaching for speakers of Sámi, Romany and other foreign languages; and teaching for Finnish students who have moved back to Finland from abroad in order to maintain the language skills they have acquired abroad. Students belonging to this category follow the regular curriculum.

France

Cross-national category A

1. Severe mental handicap. Severe mental handicap (IQ between 20 and 34) concerns persons who can benefit from the systematic learning of simple gestures.

2. Moderate mental handicap. Moderate mental handicap (IQ between 35 and 49) concerns persons able to acquire simple notions of communication, hygiene and elementary safety as well as simple manual skills, but who are incapable of learning how to do arithmetic or reading.

3. Mild mental handicap. This category covers handicaps as regards intelligence, memory and thinking. It concerns persons (IQ between 50 and 70) capable of learning practical skills and how to read, as well as basic arithmetic thanks to special education, and who can be taught a certain degree of socialisation.

4. Physical handicap. Orthopaedic and motor deficiencies have been broadly interpreted as covering the structure of the body and its visible parts. Such handicaps include mechanical and functional alterations to the face, head, neck, trunk and limbs, as well as limbs which are missing in whole or in part.

France *(cont.)*

5. Metabolic disorders. Metabolic or nutritional disorders include abnormal development and maturation, gluten intolerance, diabetes, malnutrition, and weight loss or gain (but exclude thinness and obesity).

6. Deaf. Disorders in this category concern not only the ear but also its ancillary parts and its functions. The most important subdivision is that of hearing impairment. The term "deaf" should only be applied to persons whose hearing impairment is such that it cannot be helped by any hearing aid. Like blindness, deafness is a serious sensory impairment.

7. Partially hearing. Disorders in this category concern not only the ear but also its ancillary parts and functions. The most important subdivision is that of hearing impairment.

8. Blind. Blindness is a serious sensory impairment. Such impairment may be moderate (very poor vision or partial blindness), almost total (severe or almost total blindness) or total (no perception of light). It may affect one eye or both.

9. Partially sighted. Other visual impairments include astigmatism, accommodation deficiency, diplopia (strabismus), amblyopia, and sensitivity to light.

10. Other neuropsychological disorders. Neuropsychological disorders include any interference with the basic elements of the cognitive processes. This being so, the functions listed are those which normally involve the presence of basic neuropsychological and psychological mechanisms.

11. Speech and language disorders. Speech disorders or impairments include artificial larynx, severe dysarthria, lack of voice expression, and stuttering; while language disorders or impairments include central impairment of the visual function with inability to communicate (*e.g.* severe dyslexia).

12. Other deficiencies. Other deficiencies are all those not mentioned above.

13. Multiply handicapped. Children or young people in this category suffer from a main handicap, which is usually the reason they are attending special classes. But they may suffer from other disorders in addition to this main one.

Cross-national category B

15. Learning difficulties. Special 3rd year classes and 4th year vestibule classes (second level) provide assistance and support to pupils with problems at school unable to derive benefit from the general and technical instruction normally given. Together with remedial classes, they form part of the system of assistance, support and insertion. SEGPAs (special sections for general or occupational training) are incorporated into public and private secondary schools (usually lower secondary ones). They make it easier for pupils with learning difficulties to pursue their studies.

Cross-national category C

14. Non francophone students. Initiation classes have been created in primary schools for non French speaking students of foreign nationality. Reception classes, in 1st to 4th year secondary (but mainly 1st year), are offered to foreign students (in principle, non French speaking, newly arrived in France and whose age corresponds to that of the school).

16. Disadvantaged children – ZEP. "Education Priority Areas" (Zones d'éducation prioritaires [ZEP]) are geographical areas – municipalities, districts – in which a policy of differentiated education is essential. Two types of criteria determine the delimitation of these underprivileged areas: *i*) school based (rate of year repetition, density in vocational schools, classes of reception, etc.); and *ii*) socio-economic (low parental educational level, poverty, unemployment, discomfort of the dwellings, difficulties adapting to the language or the culture). ZEPs are a development community project centred on the school and aiming at enabling children from disadvantaged backgrounds to enjoy fully their right to education.

Germany

Cross-national category A

2. Partially sighted or blind. Students: 1) having a central visual acuity in one eye or both eyes of 0.3 or less for distance despite a correction by glasses but without other aids; or 2) having a visual acuity of 0.3 (Nieden V) or less for the proximity regarding a working distance of at least 30 centimetres; or 3) whose faculty of vision is impaired to a similar degree despite better visual acuity; or 4) blind children or young people without visual faculty or whose visual faculty is largely impaired resulting in an inability to act like seeing persons (even after an optical correction, *e.g.* glasses).

3. Partially hearing or deaf. Students who are hearing impaired to a minor to medium degree or deaf students who, irrespective of their actual deficiency in hearing capacity, are not capable of perceiving acoustic signals of their environment and of using them for acquiring speech.

4. Handicapped in speaking. Students whose speech and development of speaking is largely impaired so that entry into or attendance at a regular school with ambulant school accompanying programmes (Sprachheihlassen) is regarded as insufficient.

5. Physically handicapped. Children who due to their physical handicap cannot attend regular schools because of accompanying disturbances and/or organic defects and illness.

6. Mentally handicapped. Children or young people who are severely mentally disabled as a result of damage to the central nervous system before or after birth and who have conspicuous peculiarities in their cognitive and emotional processes, expressive behaviour, motor abilities and their verbal and non verbal communication.

8. Sick. Children who are being treated in clinics, hospitals or sanatoria for a long period of time and who are capable of taking part in lessons as well as students with chronic illnesses who cannot therefore attend regular instructions.

9. Multiple handicaps. Children and young people with more than one handicap to be taken into account in the development of learning.

12. Autism. Children and young people with a severe developmental disability in verbal and non verbal communication and social interaction with resistance to environmental changes and mostly engaged in repetitive activities and stereotyped movements – based on complex impairments of the central nervous system. (No statistical data are available for this group.)

Cross-national category B

1. Students with learning handicaps. Children or young people needing special education due to a severe extensive and long lasting deficiency in their learning capacity.

7. Behaviour disorders. Children with a large range of psychological disorders that affect their social interactions.

10. Special needs in pre-primary education. Pre-school classes for five year old children with special educational needs who have not yet reached compulsory school age but whose parents wish that they receive assistance in their preparation for primary school. Attendance is voluntary.

11. Diagnostic and support classes. Special classes with the aim of observing children with special educational needs at the beginning of their attendance of special schools in order to integrate them in the most appropriate category of special education needs.

13. Remedial instruction. Students who need support because of particular and limited difficulties in basic skills concerning reading, writing or numeracy. (No statistical data are available for this group.)

Cross national category C

14. Travelling families. Children and young people who need support because their parents are itinerant workers (circus, fairs, barges). (No statistical data for these large groups available.)

15. German for speakers of other languages. Children and young people who need support because they do not have sufficient knowledge of German to enable them to follow regular instruction effectively and successfully. (No statistical data are available for this group.)

Greece

Cross-national category A

1. Visual impairments. According to the Law of Special Education 2817/14 03 2000 students may be called blind, amblyopic or partially sighted, if they have serious problems in vision. The term "blind" refers to students who learn via Braille or other non visual media. The term "partially sighted" refers to students who require adaptation in lighting or the size of print in order to learn through reading.

The Greek educational system insists that students use their residual vision so that the sensory motor abilities are reinforced. Delays or losses in orientation, mobility, communication, cognitive, and/or social development may thus be prevented. Blind students attend special education schools at primary level and mainstream schools for secondary education. There is no differentiation for partially sighted students. Blind and partially sighted students follow the general educational curricula. The Ministry of Education develops special measures in order to meet the needs of the blind.

2. Hearing impairments. The term "deaf" refers to students who are severely impaired in processing linguistic information through hearing, with or without amplification. The term "hearing impaired" refers to students whose impairment in hearing, whether permanent or fluctuating, affects their educational performance. Thus, deafness prevents an individual from receiving sound in all or most of its forms. In contrast, a child with a hearing loss can generally respond to auditory stimuli, including speech.

The distinction between deaf and hearing impaired is indispensable for diagnosis. The ability to learn oral skills depends in large part on the degree of hearing impairment. It also depends on the age at which the student became deaf (especially whether it was before or after acquiring spoken language), the timing of diagnosis of the impairment, the onset of early intervention, the family and the educational system.

The Law of Special Education (2817/2000, Article 2: Organisation) stresses the importance of early diagnosis. A team consisting of a primary school teacher, a secondary school teacher, a psychologist, a social worker and an administrative officer serves at each Centre for Diagnosis, Assessment and Pedagogical Support all over the country. Some centres are additionally staffed with specialists such as a pre-school teacher, a speech therapist, a child psychologist, an audiologist and a sign language specialist..

Deaf students follow the common core curricula, which are appropriately adapted to meet their needs with emphasis given on spoken language and articulation. The national educational system provides students with equal opportunities for education and vocational training and promotes social integration. Deaf and partially hearing students attend special education schools (pre-school, primary and secondary) as well as special classes at secondary education.

3. Physical impairments. This category includes students with serious neurological problems or orthopaedic disabilities within a heterogeneous group of conditions with a wide range of causes. Examples of some of the most common causes are: nervous system disorders, traumatic spinal cord injury, muscular dystrophy, cerebral palsy, epilepsy, muscular skeletal disorders, cardiovascular disease, coronary heart disease, respiratory disorders, emphysema, asthma, endocrine metabolic, diabetes and amputations of all types.

Students with motor disabilities may attend special education schools or mainstream school units. They are taught the same national curricula at primary and secondary level from the age of 6 to 22. After completing compulsory education, students may follow studies at: *a)* general upper secondary level schools from 14 to 22 of age (Lykeio); *b)* technical professional schools (T.E.E.) of special education either during compulsory education (level A), or after general compulsory education (level B); *c)* laboratories of special professional education from 14 to 22, according to article 2 of the Law 2640/1998. Teachers at primary level attend a two year training course and the Ministry of Education and Religious Affairs has recently designed training programmes on special education for secondary education teachers which are being implemented by universities within the Operational Plan "Education and Initial Vocational Training" of the 2nd European Community Support Framework.

Greece *(cont.)*

4. Mental impairments. This category includes students who have mental impairments, incompetence or immaturity. The term mental impairments varies considerably. It may include mental retardation; *i.e.* significantly below average general intellectual functioning, existing concurrently with deficits in adaptive behaviour, and manifested during the developmental period that adversely affects a child's educational performance. Difficulties may occur in communication, in social, academic, vocational, and independent living skills. A child may develop slowly without being mentally retarded or it may be retarded without slow development being present. A child is identified as suffering from mental retardation if there are procedures and tests related to the type of retardation and if the genetic conditions and the environmental hazards are in any case examined. The degree of mental retardation as well as the appropriate educational environment is decided on the basis of an assessment procedure performed by the Diagnostic Pedagogical Centres (KDAY).

5. Autism. According to the law 2817/14 03 2002, Article 1, autism has been included in a general category which comprises emotional and social difficulties as well as developmental disorders. Autistic children may present profound or less severe difficulties in behaviour. Development may present unsteadiness unlike mental retardation that can have slower but steadier improvement. According to this law children with autism are not categorised as handicapped. The new law introduced considerable changes in the framework of special education, one of them being the inclusion of autism as a special educational difficulty. Children with autism are under the supervision of the Ministry of Health and Welfare and are educated at special institutions. More and more children are being admitted in Special Education Schools of the Ministry of Education where there is provision in the form of special educational programmes.

This policy signals an effort to prevent children with autism from being institutionalised, and include them in primary education. The goals (academic and non academic) and objectives of the educational programmes may include social skills, functional skills (dressing, toilet training, feeding oneself, etc.), communication, and behaviour modification.

7. Other impairments. This category includes students with multiple impairments, *i.e.* when there is a co-existence of educational disabilities, deriving mainly from the neurological system of a child. These students may follow different types of schools, according to continuous re assessments in relation to the results that the educational system produces yearly. These students may have hearing, visual or sensory motor educational needs but it is not possible for them to follow the special school for their category. The state educational system establishes a special school unit in which support is provided according to the particular need of the child. This is often the case in remote areas of the country and concerns students that cannot leave their homes.

Cross-national category B

6. Learning difficulties. Students with learning difficulties are described as "having difficulties in learning, *i.e.* dyslexia, dyscalculia, difficulties in reading" (Law 2817/14 03 2000, art.1, e.). These difficulties may be due to various reasons and factors: organic, psychological, or environmental. This umbrella category covers several sub categories of learning difficulties which often are combined with autism and/or mental impairments, behaviour disturbances, communication disorders, emotional disturbance, neurological disorders, solitary behaviour, rejection due to racial and socio-economic factors, aggressiveness, etc., often resulting to social maladjustment and marginalisation. Students follow the common core curriculum but they are provided with special teaching support in one or more subjects outside the school programme. An inclusion unit can be established with decision of the District Educational Authority, the school advisor of special education and the mainstream class, according to the Presidential Decrees 603/82 and 472/83. Teachers are expected to have deep knowledge of the learning difficulty, special training in selecting the appropriate pedagogical approach and accuracy in using the methodology needed in every case so as to motivate and help the student towards his/her inclusion in the mainstream class.

Greece *(cont.)*

Cross-national category C

8. Socio-economic/cultural educational difficulties. This category has been included for the purposes of this study and classified in category C. Students of this category present social disadvantages, which are the result of their socio-economic status or their cultural and/or linguistic backgrounds. Students of this category do not fall within the framework of the Law of Special Education. (Article 1. [3]: "Students whose mother tongue is not Greek are not considered as students with special educational needs".) They do however receive additional resources as they are provided with extra help and special teaching support. Students in this category follow the common core curricula at primary and secondary level in the regular classes of the mainstream state educational system. The state provides extra teaching and resources to them so as to facilitate their full educational and social integration.

Hungary

Cross-national category A

1. Moderate degree of mental disability. Moderate cognitive dysfunction based on an organic central neural defect. It affects intellectual functions, learning abilities, social adjustment and later in life the ability for independent living and working. Students frequently have other disabilities such as physical, sensory and/or behavioural ones.

These students are typically in special schools or special classes attached to a special school for students with mild mental disabilities. The group does not follow the national curriculum but only certain parts of it, concentrating on the development of communication skills and certain elements of independence.

2. Visual disabilities. Visual impairment is officially identified in cases where the visual acuity in the corrected better eye is between 0 and 0.33 or the field of vision is not greater than 20 degrees because of an organic defect within the visual system. The category includes the following subcategories: blind students, students having low vision, partially sighted students. There are two types of special schools for this group: the schools for the blind and the schools for partially sighted, however the great majority of the latter group attends regular schools.

3. Hearing disabilities. Hearing impairment is identified in cases where there is hearing loss over the speech range 500-4 000 Hz which affects language development and/or interferes with the ability to learn because of an organic defect within the auditory system. This category includes the following subcategories: deaf (average hearing loss approximately 90db or more), partially hearing (average hearing loss between approximately 40 and 89 dB) and hearing impaired multi handicapped students.

There are two types of special schools or classes for this group: the schools for the deaf and the schools for the partially hearing students. A growing number of partially hearing students attend regular schools. Students belonging to this category follow the regular curriculum with a few modifications.

4. Physical disability. Physical disability concerns deficits of posture and/or the restriction of mobility based on organic pathologies. This category includes several sub categories (cerebral motor disturbances, paraplegia, malformations, etc.). There are special schools for students with a physical disability. An increasing number of these children attend the regular school system. Students belonging to this category follow the regular curriculum with a few modifications.

Hungary *(cont.)*

5. Autism (this subgroup belongs to the official category: Other Disabilities). Social interaction, verbal and non verbal communication are significantly affected. Other characteristics often associated with autism are repetitive activities and/or stereotype movements, resistance to environmental change or change in daily routine. There are only a few special schools exclusively for these students. Autistic students are in special groups attached to a regular pre-school or school attached to a special school for students with different other difficulties (*i.e.* mental retardation, hearing impairment).

6. Multiple disabilities. Students with two or more combinations of sensory, mental and physical disabilities. These students attend different residential special schools (schools for deaf or blind students or for those with moderate mental disabilities, etc.) depending on the main impairment. They follow a modified curriculum. This category was recognised as a separate one in 2003 modification of the Education Law.

Cross-national category B

7. Mild degree of mental disability (learning disability). Mild cognitive dysfunction can be an outcome of the disturbed development of learning. Students belonging to this category are permanent slow learners. The causes which hinder the development may be biological or lie within the family, educational and socio-cultural environment. IQ as a diagnostic measure is not used. These children are mostly in special schools or in special classes attached to an ordinary school. Their placement into regular classes has recently started. Students belonging to this category follow a centrally modified national curriculum. Certain regulations have been recently introduced – like individual developmental plans, alternative evaluation in the primary, prolongation of primary – to prevent students from being included into this category.

8. Speech disorders. Mostly temporary problems of speech development and/or speech intelligibility (about 96% dyslalia, about 2% delayed speech development and about 2% stuttering). Students attend mostly regular schools or remedial classes attached to regular schools or attached to different special schools (school for hearing impaired children, schools for learning disabled/mildly mentally retarded children) and receive intensive speech therapy in their free time. There are only a few schools exclusively for students with language and/or speech problems.

9. Other disabilities. Different forms of permanent learning disabilities on the basis of partial cognitive dysfunctions manifested in the use of reading, writing, or mathematical abilities. Also included in this category are students with attention deficits, hyperactivity, moderate or severe behaviour problems. Most of these students attend the regular school system, others learn in remedial classes attached temporarily to regular schools. Students follow the regular curriculum with certain modifications if necessary.

Cross-national category C

10. Disadvantaged students. Students living in families, where the conditions – as a consequence of behaviour, neglect and/or circumstance – hinder the child's normal physical, intellectual, emotional or moral development. Families with low income might get additional financial resources to support their children's education (estimated number: 82 000 students). The category falls outside of the Hungarian definition of disability.

Ireland

Cross-national category A

1. Visually impaired. Visually impaired students are those who have been formally identified by an ophthalmologist in accordance with agreed criteria.

2. Hearing impaired. Hearing impaired students are those whose hearing is affected to an extent that renders the understanding of speech through the ear alone, with or without a hearing aid, difficult or impossible.

3. Mild mental handicap. Students with mild mental handicap have significantly below average intellectual functioning, associated with impairment in adaptive behaviour. Such pupils would lie within the IQ range 50-70.

Ireland *(cont.)*

4. Moderate mental handicap. Pupils with moderate mental handicap fall within the I.Q. range 35-50, insofar as an intelligence quotient may be used as an indicator of a general learning disability. Many of these children will have accompanying disabilities.

7. Physically handicapped. Pupils with physical handicap have permanent or protracted disabilities arising from conditions such as congenital deformities, spina bifida and/or hydrocephalus, muscular dystrophy, cerebral palsy, brittle bones, haemophilia, cystic fibrosis, asthma or severe accidental injury.

8. Specific speech and language disorders. Children with specific speech and language disorders are those whose non verbal ability is in the average range, or higher, and whose skill in understanding or expressing themselves through the medium of spoken language is severely impaired.

11. Severely and profoundly mentally handicapped. Children in this category are described as having an Intelligence Quotient of 35 or below. (Children with an I.Q. in 35-20 range are described as having a "severe" general learning disability. Children with an Intelligence Quotient under 20 are described as having a "profound" general learning disability). Most children in this category will have additional disabilities.

12. Multiply handicapped. Children with two or more disabilities are described as having multiple disabilities.

Cross-national category B

5. Emotionally disturbed. This term includes pupils with behavioural and conduct disorders as well as those with emotional disturbance. Emotional disturbance and/or behavioural disorder is defined as an abnormality of behaviour sufficiently marked and prolonged to cause handicap in the pupil and/or serious distress or disturbance in the family, school or community.

6. Severely emotionally disturbed. As above (cat. 5) to a more severe level.

9. Specific learning disability. Children with specific learning disability have significant impairments in either reading, writing, spelling or arithmetical notation and it is established that the primary cause of such impairments is not attributable to below average intellectual range, to defective sight/hearing, to emotional factors, to any physical condition or to any extrinsic adverse circumstances.

15. Pupils in need of remedial teaching. Pupils in mainstream schools who have clearly observable difficulties in acquiring basic skills in literacy and/or numeracy or who have some difficulties in learning of a more general nature.

Cross-national category C

10. Classes of children of travelling families. Traveller children are children of families who are identified by themselves and by members of the "settled" community as people with a distinctive lifestyle, traditionally of a nomadic nature even though not now habitually so.

13. Young offenders at risk. Children in the age range of 12-16 years who: *a)* have been convicted of a crime, *b)* are on remand by the courts, *c)* are out of control and are under a care order.

14. Children in schools serving disadvantaged areas. Educationally disadvantaged areas are those where the quality of the educational environment is low in most of the homes, where the level of education attained by the mother is low in most cases and where there are indicators of relative poverty regarding most homes, *e.g.* living in state housing, having a medical card. In Ireland the Department of Education and Science recognizes that, in addition to schools in designated disadvantaged areas, pockets of disadvantage exist in other areas including rural areas and smaller urban areas in tows and villages. Additional resources, in terms of teachers and/or grants are provided to the school serving these children. The level of support is dependent on the reported and quantified level of disadvantage. The principal support scheme is called "Giving children an even break". All schools can seek support for other necessitous children and this support may be provided by means of free school books, back to school allowance (in September), etc.

16. Children of refugees. Children of parents who have been granted or are seeking political asylum in Ireland.

Italy

Cross-national category A

1. Visual impairment. Includes blind and partially sighted children.

2. Hearing impairment. Includes deaf and partially deaf children.

3. Moderate mental handicap. This category includes mild and moderate mental retardation. It includes therefore those students who are classified as "educable" (that is, who can acquire the knowledge and skills demanded of the final year of primary education – age 10-11) and as "trainable" (that is, who can acquire the knowledge and skills demanded of the second year of primary education – age 7-8). The IQ levels of these students range from 70 to 35-40.

4. Severe mental handicap. This category includes both the group with serious mental retardation and the group with very serious mental retardation. It includes students who can at most acquire a minimum level of communicative language and those who can at most acquire very basic self-care and communication skills. The IQ levels of these pupils range from 35-40 to under 20-25.

5. Mild physical handicap. Children with slight physical impairments that do not prevent them from becoming relatively autonomous.

6. Severe physical handicap. Children with severe physical impairments profoundly affecting personal autonomy. These children require adequate and continuous assistance.

7. Multiple handicap. Children with two or more of the impairments included in categories 1 to 6. Residual category.

Cross-national category C

8. Students with foreign citizenship. Students with a foreign citizenship do not directly receive additional resources but benefit from the resources allocated to schools to promote and increase activities/projects of inclusion, *e.g.* intercultural education, language training, etc.

Japan

Cross-national category A

1. Blind and partially sighted. Those with corrected visual acuity of less than 0.1 for both eyes. Those with impairment of visual functions other than visual acuity and who find it either impossible or extremely difficult to recognize normal characters or figures visually even with a magnifying glass.

2. Deaf and hard of hearing. Those with a hearing level of more than 60 decibels and who find it either impossible or extremely difficult to comprehend normal speech even with a hearing aid.

3. Intellectual disabilities. Those with a developmental intellectual retardation and who have difficulty communicating with others and need frequent assistance in daily life. Those with a developmental intellectual retardation who find extremely difficult to adapt to social life.

4. Physically disabled. Those who find it impossible or extremely difficult to perform basic movements including walking and writing in daily lives even with an orthosis. Those with milder disabilities and who require daily medical observation and guidance.

5. Health impaired. Those with a chronic disease of heart, chest or kidney and who require more than six months of medical care or restricted living.

6. Speech impaired. Those with speech impairments resulting from causes other than speech impairments from deafness, hard of haring, cerebral palsy, and intellectual disabilities.

7. Emotionally disturbed. Those with autism or with similar disabilities who have difficulty communicating or building relationships with others. Those with selective mutism caused by psychological factors and who have difficulty adapting to social life.

Cross-national category C

8. Students who require Japanese instruction (linguistic difficulties).

Korea

Cross-national category A

1. Students with visual impairments

1. Students who have corrected visual acuity below 0.04 for both eyes.
2. Students who are unable to perform learning tasks by vision, and mainly rely on touch or hearing to learn because of severe visual impairments.
3. Students who have corrected visual acuity of 0.04 or above for both eyes but have difficulty in performing visual tasks even with specific learning materials or modification of tasks.
4. Students who can perform visual tasks only with specific optical tools, learning materials, or equipments.

2. Students with hearing impairments

1. Students who have a hearing loss of 90 dB or above in both ears.
2. Students who are incapable of or have difficulty in oral communication, even with a hearing aid, due to severe hearing loss.
3. Students who have limits in hearing in everyday language use, and thereby have difficulty in normal schooling.

3. Students with mental retardation. Students who have an IQ of 75 or less with deficits in adaptive behaviours.

4. Students with physical impairments. Students who have disabilities in functioning and forms of the body and are not capable of or have difficulty in supporting the body or in the movement of limbs, and thereby have difficulty in normal schooling.

6. Students with speech impairments. Students who have problems in articulation, fluency, voice or verbalization, and thereby have difficulty in communication and learning.

8. Students with other disabilities stipulated by the Decree of the Ministry of Education and Human Resources Development.

Cross-national category B

5. Students with emotional disturbances

1. Students who have an inability to learn which can not be explained by any intellectual, sensory, or physical disabilities.
2. Students who have an inability to build or maintain satisfactory interpersonal relationships with peers and teachers.
3. Students who display inappropriate behaviours or feelings under normal circumstances.
4. Students who have a general pervasive mood of unhappiness or depression.
5. Students who have a tendency to develop physical symptoms or fears associated with personal or school problems.
6. Students who have deficits in responses toward sensory stimuli, language, cognitive ability, and interpersonal relationships.

7. Students with learning disabilities. Students who have specific learning problems for example in mathematics, speaking, reading, or writing.

9. Underachievers in learning. This category includes students who lack basic learning skills and fall short of a minimum competency level for each subject; they are provided with extra resources under the Primary and Secondary Education Act and receive additional support in reading, arithmetic and mathematics. Temporary remedial teaching is usually provided by general education teachers for them. (Statistical data are not available).

Korea *(cont.)*

Cross-national Category C

10. Students with socio-economic difficulties. Socio-economically disadvantaged students are provided with extra help and special teaching support. They follow regular curricula in regular classes and are officially registered in the schools. Families with low income can get additional financial help to support the students' education. (Statistical data are not available.)

11. New arrivals in Korea. Students recently arrived in Korea go into "bridge" classes that help them to adapt to the Korean socio-economic situation and school system (statistical data are not available).

12. Students under the jurisdiction of juvenile courts. Students placed by juvenile courts in isolated schools in prison are provided with additional teaching in addition to the regular curricula (statistical data are not available).

Luxembourg

Cross-national category A

1. Mental impairment. Developmental retardation.

2. Emotionally disturbed children. Behavioural problems, hyperactivity, aggressiveness.

3. Sensory impairment. Visual impairment, speech impairment.

4. Motor impairment. Cerebral disability.

Cross-national category B

6. Learning difficulties. Dyslexia, dyscalculia.

Cross national category C

5. Social impairment. Children from low socio-economic status families, children from minorities.

Mexico

Cross-national category A

1. Blindness. Children or young people with no visual faculty or whose visual faculty is largely impaired. Optical correction does not improve their visual capacity and they cannot function like seeing persons. This is usually a permanent condition. Blind persons require alternative options and/or equipment for curriculum accessibility. They have serious problems of displacement and need special instruction to achieve independent living. Blindness does not affect intellectual performance.

2. Partial visual disability. This is defined as a reduction of visual sharpness in both eyes. People with partial visual disability benefit from optical supports such as: magnifying glasses, eyeglasses, binoculars or amplifying screens, but they cannot read regular size text or images. They can overcome problems for curriculum accessibility through special equipment or alternative written language supports. They need assistance to be able to move from one place to another. Frequently they can only see shades or bulks. Visual disability can be progressive until it becomes blindness. This condition does not affect the person's intellectual performance.

Mexico *(cont.)*

3. Intellectual disability. This category includes different grades of intellectual disability which used to be defined in terms of IQ. Since the introduction of legislation for the adoption of integration policy intellectual disability has been re conceptualised. It is now defined in relation to the child's performance in his/her interaction with the environment. It implies significant subaverage general intellectual functioning, learning difficulties and slow development of adaptive behaviour, all of which affect a child's educational performance. In the school context, students with intellectual disability show more difficulties than their peers to understand instructions, abstract concepts and metaphorical or figurative language. As a result, they show dependent conduct and require support to finish any learning activity, especially when it involves a new concept or concept relations. They demand more interactivity with the environment to understand concepts and to have longer periods of attention and concentration.

In summary, they require full interaction with an enriched learning environment for the development of basic learning competence and skills. Children with an intellectual disability are also slow in the development of social skills and in the control of their emotional feelings and reactions. Most of these students can attend basic education in the regular school, with support and curricular adaptations, including flexibility.

4. Auditory or hearing disability. An auditory disability is a superficial to moderate loss of hearing. Persons with an auditory disability can benefit from the use of a hearing aid to perceive oral language and develop it. Children with auditory disabilities can develop a great ability for lip reading as a strategy for better oral language comprehension and better communication skills. This condition does not affect the person's intellectual performance. Some children with mild hearing disability can also learn sign language as a first or second language to communicate with non oral deaf persons or to act as interpreters.

5. Deafness or severe auditory disability. Deafness is a severe sensory impairment that hinders hearing and therefore the development of oral language. Deaf children use sign language as their mother tongue but can also learn the national oral language after a special educational intervention. They must learn written language as a means of communication with the hearing population and for accessibility to the written learning environment (books, letters, notes, computer information, etc.). They can also develop lip reading skills to facilitate and enhance their communication with the majority hearing society. Deafness does not affect the person's intellectual performance, but the development of a sign, oral or written language is necessary for the complete development of their intellectual potential and their accessibility to the basic learning curricular competencies.

6. Motor disability. This category includes moderate to severe motor disabilities.

Moderate motor disability: when the person's motor condition is determined by peripheral damage. This means that the disability is partial and only affects the movement or the co-ordination of movements of specific parts of the body.

Severe motor disability: when the person's motor condition is determined by central neurological damage that affects the overall movements (as in cerebral palsy).

In both cases physical architectural adaptations of the school environment are required to enhance accessibility, as well as the use of special school furniture and equipment in classrooms. The provision of these adaptations determines success in the integration of children with motor disabilities to mainstream education. Students with severe motor disability require additional adaptations and supports for fine co-ordination of movements for speech pronunciation, writing, drawing and other skills related to inputs and outputs of the learning context. Motor disability is generally a permanent condition but does not affect the person's intellectual potential.

7. Multiple disability. Students with two or more of the disabilities included in categories 1 to 6.

Mexico *(cont.)*

Cross-national category B

8. Learning difficulties. Children's difficulties first become manifest at the start of primary school or as soon as they start formal contact with the school curriculum, especially in reading, writing or mathematics. These children do not have a disability and they show average or above average intelligence. Normally their language development is good, although some of them have associated speech pronunciation problems. These difficulties are not associated with disadvantages, and have been recently classified as a disruption between the child and the learning context. Learning difficulties are often transitory and can be overcome with transformation of the learning environment, especially through teachers' orientation towards meaningful learning in the classroom rather than mechanical, non meaningful learning.

9. Outstanding capabilities and skills. These children are described as those who show above average skills in one or several areas of knowledge. The can access to curriculum without difficulty; they show commitment to leaning, they are persistent in the fulfilment of tasks and show great creativity in problem solving. Frequently, they show special talents in one or more academic, personal or social areas.

Cross-national category C

10. Compensatory educational needs. Compensatory education needs are those present in all students who attend regular, general or indigenous education services that have limitations in structure, equipment, stability of the teaching staff and/or low scores in school performance indicators. Additional resources are therefore supplied to the school and/or the students to ensure their access to the school curriculum and the acquisition of basic learning competences with quality and equity. This category also includes students from poor zones of the country who receive economic scholarship from the OPORTUNIDADES programme, intended to support their enrolment, regular attendance and completion of school.

11. Communitary educational needs. This category includes students that live in small communities of less than 500 inhabitants, with high marginalisation, extreme poverty and population dispersion. These communities lack regular basic schooling services and, in general, have linguistic and cultural characteristics of their own, different from those that define behavioural patterns of the national school culture.

12. Indigenous communitary educational needs. Indigenous education promotes the development of capabilities and skills of those who belong to cultural and linguistic contexts of indigenous Mexican groups. The educational models are suited to the specific conditions and characteristics of the different cultural and ethnic groups. Largely due to the isolation and population dispersion of the majority of their settlements throughout the national territory, these indigenous people suffer from severe underdevelopment, which reduces their living standards and limits their possibilities for growth. The general aims and objectives of the national curriculum encompass the education provided to indigenous children and grant the necessary adaptations to cater to Mexico's cultural diversity.

13. Migrant educational needs. The migrant agricultural population goes from its hometown to another economic region or zone where temporal workforce is required. 60% belongs to diverse ethnic groups with a majority of monolingual or incipiently bilingual members. They live during the harvest period in agricultural camps which they share with migrants from other ethnic groups. The many migratory routes, the diversity of cultures and languages that converge in each camp, and the difficulty to foresee the length of the agricultural cycles have a negative impact in planning and delivery of the educational services targeted at these workers and their families.

Netherlands

Cross-national category A

1. Deaf children. A student is eligible for special education if he/she has a loss of hearing of more than 80dB (without a hearing aid) or between 70-80 dB and is completely deaf.

2. Hard of hearing. A student is eligible for special education if he/she has a loss of hearing between 35 dB and 80 dB (without a hearing aid). Students with a hearing loss of between 70 dB and 80 dB who are not considered to be deaf (see 1). In addition it should be made clear whether a student has difficulties in attending (mainstream) education due to his/her handicap.

This is the case if the student has severe problems in the development of speech and language or severe learning difficulties or social emotional problems.

3. Language and communication disabilities. A student is eligible for special education if a speech/ language disorder has been proven on one or more of the following areas: speech production, speech perception and/or defects in the syntactical, lexical and semantic knowledge. Learning difficulties are due to the speech/language disorder.

4. Visual handicap. This category includes blind and partially sighted students. A student is included in this category when the visual acuity is < 0.3 or the field of vision is not greater than 30 degrees. This category also includes students with a visual handicap in combination with a mental handicap (multi-handicapped pupils).

5. Physically handicapped/motor impairment. This category includes students with congenital and non congenital disorders or dysfunctions. Students in this type of education have serious neurological or orthopaedic problems and are in need of regular medical or paramedical treatment or assistance and/or special teaching materials. It has to be proven that they cannot attend mainstream education with technical aids and support and that a special school is needed.

6. Other health impairments. This category includes students with chronic illnesses, like heart disease, respiratory disorders, diabetes, epilepsy and those who need regular (para-) medical assistance and treatment. This category also includes students with neurological or psychiatric problems. Students with motor impairments are not included in this category. The illness or disorder has to affect the educational performance of the student in such a way that special education is recommended.

8. Mental handicaps (severe learning disabilities). This category includes students with a profound, severe, moderate and mild mental handicap. IQ: less than 60 or between 60 and 70 with a low social self-reliance level.

9. Behaviour disabilities. This category includes students with severe behaviour problems. Most of them have psychiatric, neurological or developmental disorders like autism (PDD NOS and Asperger's syndrome included), ODD, Tourettes syndrome, severe ADHD, or they suffer from serious depression or psychosis (DSM IV classified). Often a combination of disorders or a combination of a disorder with a low average IQ leads to the transfer to special education. Due to the disorder these students have severe socio-emotional problems not only at school but also at home and during recreation and leisure activities. Due to the disorder the development and the learning process of these students is seriously disturbed and as a result they do not benefit sufficiently from education. Extra support in mainstream education has been proven unsuccessful. Admission to special education gives them a chance to benefit more from education, since special schools for behavioural disorders have more possibilities to support students in their learning process.

10. Chronic conditions requiring paediological institutes. Admission to this type of special education is possible if there is a serious behaviour problem and due to that a serious disturbance of the development of the student. At the moment of admission the nature of the disorder is not clear. During an initial period students are placed in this type of school, where they are observed, diagnosed and treated. After a limited period they are transferred to another special school or to a mainstream school with support. A limited number of students stay in these schools until they transfer to secondary education.

Netherlands *(cont.)*

11. Multiply handicapped. A student is admitted to this type of special education if he/she has a combination of a mental handicap and a physical or sensory handicap.

Cross-national category B

7. Learning and behaviour difficulties. This category includes students with heterogeneous (learning and behaviour) difficulties like ADHD, PDD NOS, dyslexia or those with a low average IQ. It concerns students for whom support within mainstream primary education has not been enough. Their problems are not severe enough for referral to special education. They are referred to a school for special primary education. These schools (or special classes) work with the same curriculum as the mainstream schools, but the classes are smaller and there is more specialised support available.

13. Students in vocational training with learning difficulties. Students can be admitted to special classes within the mainstream system for secondary education if they have learning difficulties (IQ: > 60 < 80) as a result of which they will not be able to finish mainstream secondary education with a certificate. They are prepared for transition to the labour market. Students with an IQ between 75 and 90, learning difficulties and serious social emotional problems and those with a higher IQ but with severe social emotional problems due to, for example, autism are also included in this category. Their education is orientated towards gaining a qualification.

Cross-national category C

12. Students from disadvantaged backgrounds. Schools receive additional funding for students who come from a disadvantaged ethnic or socio-economic background.

Poland

Cross-national category A

1. Light mental handicap. Light mental handicap covers handicaps related to intelligence, cognitive processes, memory and thinking. Persons with a light mental handicap (IQ between 51 and 67) are capable of learning practical skills, reading, writing and notions of arithmetic if they receive special education (and can also be taught a certain degree of socialisation).

2. Moderate and severe mental handicap. Moderate handicap (IQ between 36 and 51) – these students are able to acquire simple notions of communication, simple manual skills, hygiene and elementary safety, but they are incapable of learning arithmetic or reading.

Severe mental handicap (IQ between 20 and 35) – these students can benefit from the systematic learning of simple gestures.

3. Profound mental handicap. Profound mental handicap (IQ between 0 and 19) – students with profound mental handicap have severe problems with learning simple gestures.

4. Blind. Total lack of sight. Visual acuity at 0-1/20 of normal range, or no larger than 1/20 of normal range, limited field of vision no longer than 20 degrees, regardless of visual acuity. Blind students cannot read from a close distance print Sn.1.5 even after correction.

5. Partially sighted. Visual acuity between 1/20 and 5/20 of normal range; field of vision limited to 30 degrees, regardless of acuity (acuity can be better than 5/20 of the normal range). Partially sighted pupils can read after correction Sn. 1.5 print from a close distance.

6. Deaf. Loss of hearing above 90 dB.

7. Partially hearing. Loss of hearing between 40 and 89 dB; students have to use a hearing aid.

8. Chronically ill. Refers to students who suffer from various psychosomatic illnesses. It is the reason of long lasting hospital, health resort or home treatment. Schooling is organised in hospitals or health resorts. Organisation and range of classes are adjusted to children's abilities.

Poland *(cont.)*

9. Motion handicap. Refers to students with various forms of motor dysfunction based on impairment of organs of movement. Students have to use: artificial limb(s), wheelchair or other aids.

13. Autism. Refers to students with non specific developmental disturbance since birth. Autistic students present psychomotor problems which prevent them from being included in the social environment and the regular educational system. This is a developmental disability that significantly affects verbal and non verbal communication and social interaction. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines.

14. Multiple handicap. Refers to students with at least two co-existent sensory, mental or motor impairments.

Cross-national category B

11. Behaviour difficulties. Refers to students whose behaviour makes their social functioning difficult. Symptoms of behaviour difficulties include social withdrawal or hyperactivity.

12. At risk for addiction. Refers to students whose behaviour puts their physical or psychological health at risk.

15. Remedial classes. Remedial classes are organised for students with substantial lack of education and skills to help them achieve the level of education and skills appropriate to their age group.

16. Therapeutic classes. Therapeutic classes are organised for students with homogenous or multiple disorders requiring adaptation of the teaching organisation and processes and long lasting special help.

17. Remedial occupations. Remedial occupations are organised for students with severe retardation in their education. The number of students taking part in remedial occupations should be 4-8 persons.

18. Compensatory occupations. Compensatory occupations are organised for students with specific learning difficulties that make it impossible for them to achieve the level of skills appropriate to their age. The number of students taking part in compensatory occupations should be 2-5 persons.

19. Individual education. Students whose health condition makes it impossible or difficult for them to participate in regular school or pre-school education.

Cross-national category C

10. Social disadvantages. Refers to students who do not accept current social norms. They display anti-social behaviour, inability to function in the group, and disturbance of emotional processes. Students in this category may be dangerous to other individuals in their environment.

Slovak Republic

Cross-national category A

1. Hearing impairment. Loss of hearing of different degrees, types and origin. In the context of education loss of hearing is classified as follows: moderate (up to 70dB) or severe (70 dB and more). The type of education provided depends on the degree of loss of hearing and age of onset. Students are educated in special pre-primary, primary and secondary schools for the hearing impaired or they may be integrated in regular schools. The programme follows that of the regular curriculum with some modification, including the teaching of special subjects, special teaching methods and the use of special aids

2. Visual impairment. This category includes *a)* blind, *b)* partially sighted, *c)* dim sighted, *d)* squint eyed – this means with disorders of binocular eyesight. Pupils are educated in special preprimary, primary and secondary schools for visually impaired or they are integrated in regular schools. The programme follows that of the regular curriculum with some modification, including the teaching of special subjects, special teaching methods and the use of special aids. Textbooks and other teaching materials are supplied in Braille.

Slovak Republic *(cont.)*

3. Physical disability. Innate or acquired defects of movement and the supporting systems or impairments of the nervous system if demonstrated by impaired motion. Students are educated in special preprimary, primary and secondary schools for the physically handicapped or they are integrated in regular schools. The programme follows that of the regular curriculum with some modification, including the teaching of special subjects, special teaching methods and the use of special aids.

4. Speech disorders. Impaired ability of verbal form of interpersonal communication, which can be demonstrated as lack of speech – developmental, organic or neurotic, sound disturbance, disturbance of articulation and continuity of speech. Students are educated either in regular schools and visit a logopedic department or in special preprimary and primary schools for students with speech disorders. Students follow either the programme of regular schools with extra support for the development of communication skills or special educational programmes. Special teaching methods and the assistance of speech therapists are used.

5. Mild mental retardation. Intellectual disability corresponding to an IQ between 51-70. Students receive basic education and vocational training. They are educated mostly in special preprimary, primary and vocational schools, in special classes at regular schools and a smaller number are integrated in regular schools. These students follow a special curriculum taught through special teaching methods. After education they are able to integrate into regular social and professional environments.

6. Moderate severe mental retardation. Intellectual disability corresponding to IQ less than 50. Students are educated in special preprimary and primary schools for the mentally disabled following special educational programmes that aim to teach basic social and vocational skills. After education some of them are able to work in a sheltered environment (workshops).

7. Autism. A disorder characterised by isolation of an individual in his internal world, a reduced level of social contact to the point of isolation and lack of emotional contact with the environment. These students are educated in special classes in regular schools or in special schools for the mentally disabled depending upon the level of intellectual abilities (IQ within normal range or below).

11. Multiple impairment. A combination of several handicaps which results in a new type of handicap. Most frequently, it is a combination of a mental handicap with a hearing, sight or physical handicap, or a speech and behaviour disorder or a social maladjustment. Pupils are educated in special preprimary or primary schools in where they follow special educational programmes, in the majority of cases in accordance with individual educational plans. In the case of special maladjustment they are placed in special educational establishments. At special vocational schools they are prepared for simple manual activities. Special educational methods are applied.

12. Ill and physically weak children in medical facilities. Those who are treated in a hospital, sanatorium or convalescent home. These are children with chronic diseases, recovering from injuries or operations and with weakened health. Depending on the health condition, children can be taught in accordance with the specific educational programmes for special preprimary or primary schools or those for regular schools.

Cross-national category B

8. Learning difficulties. Impaired communication ability in written speech (dyslexia, dysorthography, writing disability, arithmetic disability). Students are educated in special classes at regular primary schools or are integrated into regular schools. They follow the educational programmes for regular schools with special teaching methods.

9. Behavioural disorders. Non adaptive forms of individual behaviour, which are demonstrated in social relations and in the socialisation process of the individual. It includes a broad spectrum of maladaptive forms of behaviour which are causing educational problems and can be biological or psychological in origin (weakened body, diseases, organic damage of CNS, uneven development of processes of maturing of personality, ADD and ADHD syndromes) or a result of a socially unsuitable educational influence and cultural background (family, school), or a combination of both factors. The co-operation of teachers and psychologists or special teachers is required in the education of these students.

Slovak Republic *(cont.)*

Cross national category C

10. Social maladjustment. Non adaptive forms of behaviour, breaching ethical, legal and other social standards, when the individual has not reached the age of criminal responsibility or legal standards for juveniles are valid. Children and young people (10-18 years of age) with such a degree of impaired psycho-social development are placed in special educational establishments with the purpose of a re education. They are educated in accordance with the educational programmes for regular primary and secondary schools or, in the case of individuals with a mental disability, in accordance with the educational programmes for special schools.

13. Socially disadvantaged children. Children with retardation in their psychosocial development, where the disadvantaged socioeconomic background and/or cultural and linguistic differences are deemed to be the main reason. These children start their education in preparatory classes at regular primary schools where the educational programme matches ISCED level 0. After one year they continue in education either at regular primary schools or at special schools for the mentally disabled depending on their academic achievements and psychological problems.

Spain

Cross-national category A

1. Hearing impaired. Students with partial or complete hearing loss.

2. Motor impaired. Motor system alteration due to a deficient osteoarticular, muscular and/or nervous system activity.

3. Visual impaired. Significant or complete vision loss.

4. Mental handicap. Intellectual performance significantly below average and substantial limitations in adaptive development developed before age 18.

5. Serious personality disorders, psychosis and autism. Personality alteration, generally linked with psychosis and autism.

6. Multiple impairment. Two or more concurrent disabilities.

9. Students in hospitals or with health problems. Students who have serious health problems and are hospitalised or housebound.

Cross-national category B

7. Gifted and talented. Intellectual capability above average, high degree of devotion to tasks and creativity level.

11. Learning difficulties. Refers to temporary learning difficulties (dyslexia is included in this category).

12. Curricular diversification. For students who encounter difficulties at the second stage of the compulsory secondary education. It consists specifically of a programme that must ensure individualised teaching. The curricular content is adapted and a specific methodology is employed to allow them to complete successfully the above mentioned stage.

Cross-national category C

8. Students with compensatory educational needs. For students with social or cultural problems which are the cause of a delay in their acquisition of knowledge.

10. Children of itinerant workers. For students whose parents are itinerant workers (temporary, circus, fair).

Switzerland

The classifications and the assignment of various special schools and classes to categories of special educational needs were established by the *Schweizerische Zentralstelle für Heilpädagogik* (Swiss Secretariat for Special Education) in co-operation with cantonal experts. An exact national definition of categories is not available.

Cross-national category A

9. Students with a mental handicap – educable mental handicap: special schools

The Swiss Federal Disability Insurance has laid down the following eligibility criteria for receiving additional resources for schooling: insured persons with mental retardation, with IQs of 75 and below.

10. Students with a mental handicap – trainable mental handicap: special schools

The Swiss Federal Disability Insurance has laid down the following eligibility criteria for receiving additional resources for schooling: insured persons with mental retardation, with IQs of 75 and below.

11. Students with a mental handicap – multiply handicapped: special schools

The Swiss Federal Disability Insurance has laid down the following eligibility criteria for receiving additional resources for schooling: insured persons with mental retardation, with IQs of 75 and below.

12. Physical disabilities: special schools

The Swiss Federal Disability Insurance has laid down the following eligibility criteria for receiving additional resources for schooling: insured persons with a severe physical disability.

13. Behaviour disorders: special schools

The Swiss Federal Disability Insurance has laid down the following eligibility criteria for receiving additional resources for schooling: insured persons with a severe behavioural disturbance.

14. Deaf or hard of hearing: special schools

The Swiss Federal Disability Insurance has laid down the following eligibility criteria for receiving additional resources for schooling: insured persons with hearing impairment or deafness, with a medium hearing loss of the better ear of at least 30 dB or an equivalent hearing loss on a language audiogram.

15. Language disability: special schools

The Swiss Federal Disability Insurance has laid down the following eligibility criteria for receiving additional resources for schooling: insured persons with a severe language impairment

16. Visual handicap: special schools

The Swiss Federal Disability Insurance has laid down the following eligibility criteria for receiving additional resources for schooling: insured persons with visual impairment or blindness, with a corrected vision which is less than 0.3 in both eyes.

17. Chronic conditions/prolonged hospitalisation: special schools

18. Multiple disabilities: special schools

The Swiss Federal Disability Insurance has laid down the following eligibility criteria for receiving additional resources for schooling: insured persons for whom none of the particular single criteria applies but who are multiply affected due to a combination of the above leading to a health impairment and therefore to an inability to participate in the regular school system.

Cross-national category B

1. Learning disabilities – introductory classes: special classes

2. Learning disabilities – special classes: special classes

3. Learning disabilities – vocationally oriented classes: special classes

4. Behavioural difficulties: special classes

6. Physical disabilities: special classes

7. Sensory and language impairments: special classes

8. Students who are ill/hospital classes: special classes

19. Others of the group "special curriculum": special classes

Cross national category C

5. Foreign first language: special classes

Turkey

Cross-national category A

1. Visual impairment. A condition characterised by a partial or total absence of vision that negatively affects the educational performance and social adjustment of the individual.

2. Hearing impairment. A condition characterised by a difficulty in the learning of speech, use of language and communication due to a partial or total absence of hearing sensitivity that negatively affects the educational performance and social adjustment of the individual.

3. Orthopaedic impairment. A condition characterised by a disease, defect or disability in the skeleton, muscles and joints that negatively affects the educational performance and social adjustment of the individual.

4. Moderate learning disability. A condition characterised by a delayed language and speech development, the manifestation of social, emotional, or behavioural problems as well as a delayed acquisition of reading, writing and arithmetic skills.

5. Severe learning disability. A condition characterised by a significantly delayed language and speech development, a manifestation of significant social, emotional or behavioural problems as well as a delayed acquisition of basic self-help skills.

6. Language and speech difficulty. A difficulty in the use of language, learning of speech, and communication due to an impairment and disorder occurred in verbal communication in different levels and forms that negatively affect the educational performance and social adjustment of the individual.

7. Gifted or talented. Having exceptional abilities in academic areas and/or arts that results in a higher level of performance compared to peers.

8. Chronic illness. Having an illness which occurred during the developmental period, requiring permanent care and treatment that negatively affects the educational performance and social adjustment of the individual.

9. Neurological injury. A neurological defect which occurred during the developmental period that negatively affects the educational performance and social adjustment of the individual.

13. Autism. A condition that is evident in early childhood, significantly and negatively affecting verbal and non verbal communication, educational performance and social adjustment of the individual.

Cross-national category B

10. Specific learning difficulty. A condition in one or more of the information processing areas involved in understanding or in using language, characterised by an inadequate capacity to listen, speak, read, write, spell, concentrate or do arithmetic that negatively affects the educational performance and social adjustment of the individual.

11. Emotional adjustment difficulty. A condition that lasts over a long period of time and cannot be explained by health, mental, or emotional factors; manifested through one or more of the following characteristics: inability to build and maintain satisfactory intra and interpersonal relationships; general mood of unhappiness and depression; or physical symptoms such as fears, biting ones nails, sucking the fingers due to personal or school problems that negatively affect educational performance and social adjustment of the individual.

Cross-national category C

12. Social adjustment difficulty. A condition that is characterised by risky living conditions, drug abuse, malnutrition, immigration, delinquency, neglect, abuse, abandonment, and language differences that negatively affect the educational performance and social adjustment of the individual.

United Kingdom (England)

Cross-national category A

1. Children with statements (records) of special educational needs. The statement (record) of special educational needs is a legal document that sets out the child's needs and all the special help he or she should have, which may include money, staff time and special equipment. It also sets out the responsibility for these resources between the school, local authority and others agencies such as health and social services. The statement (record) will also specify the educational placement of the child – whether in mainstream (regular) school, special school or other form of specialist provision. In England, Wales and Northern Ireland, the vast majority of pupils in special schools will have a statement. In Scotland, a smaller proportion of pupils in special schools will have records.

Cross-national category B

2. Children with special educational needs without statements (records).

United States

Cross-national category A

1. Mental retardation. "Mental retardation" means significantly sub average general intellectual functioning existing concurrently with deficits in adaptive behaviour and manifested during the developmental period that adversely affects a child's educational performance (34 Code of Federal Regulations §300.7).

2. Speech or language impairment. "Speech or language impairment" means a communication disorder such as stuttering, impaired articulation, a language impairment, or a voice impairment that adversely affects a child's educational performance (34 Code of Federal Regulations §300.7).

3. Visual impairments. "Visual impairment including blindness" means an impairment in vision that, even with correction, adversely affects a child's educational performance. The term includes both partial sight and blindness (34 Code of Federal Regulations §300.7).

5. Orthopaedic impairments. "Orthopaedic impairment" means a severe orthopaedic impairment that adversely affects a child's educational performance. The term includes impairments caused by congenital anomaly (*e.g.* clubfoot, absence of some member, etc.), impairments caused by disease (*e.g.* poliomyelitis, bone tuberculosis, etc.), and impairments from other causes (*e.g.* cerebral palsy, amputations, and fractures or burns that cause contractures) (34 Code of Federal Regulations §300.7).

6. Other health impairments. "Other health impairment" means having limited strength, vitality or alertness, due to chronic or acute health problems such as a heart condition, tuberculosis, rheumatic fever, nephritis, asthma, sickle cell anaemia, haemophilia, epilepsy, lead poisoning, leukaemia, or diabetes that adversely affect a child's educational performance (34 Code of Federal Regulations §300.7).

8. Deaf/blindness. "Deaf/blindness" means concomitant hearing and visual impairments, the combination of which causes such severe communication and other developmental and educational problems that they cannot be accommodated in special education programmes solely for children with deafness or children with blindness (34 Code of Federal Regulations §300.7).

9. Multiple disabilities. "Multiple disabilities" means concomitant impairments (such as mental retardation blindness, mental retardation orthopaedic impairment, etc.), the combination of which causes such severe educational problems that they cannot be accommodated in special education programmes solely for one of the impairments. The term does not include deaf/blindness (34 Code of Federal Regulations §300.7).

10. Hearing impairments. Hearing impairment includes deafness and hard of hearing. "Deafness" means a hearing impairment that is so severe that the child is impaired in processing linguistic information through hearing, with or without amplification, that adversely affects a child's educational performance. "Hard of hearing" means an impairment in hearing, whether permanent or fluctuating, that adversely affects a child's educational performance but that is not included under the definition of deafness in this section (34 Code of Federal Regulations §300.7).

United States *(cont.)*

10. Hearing impairments. Hearing impairment includes deafness and hard of hearing. "Deafness" means a hearing impairment that is so severe that the child is impaired in processing linguistic information through hearing, with or without amplification, that adversely affects a child's educational performance. "Hard of hearing" means an impairment in hearing, whether permanent or fluctuating, that adversely affects a child's educational performance but that is not included under the definition of deafness in this section (34 Code of Federal Regulations §300.7).

11. Autism. "Autism" means a developmental disability significantly affecting verbal and non verbal communication and social interaction, generally evident before age 3, that adversely affects a child's educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences. The term does not apply if a child's educational performance is adversely affected primarily because the child has a serious emotional disturbance (34 Code of Federal Regulations §300.7).

12. Traumatic brain injury. "Traumatic brain injury" means an acquired injury to the brain caused by an external physical force, resulting in total or partial functional disability or psychosocial impairment, or both, that adversely affects a child's educational performance. The term applies to open or closed head injuries resulting in impairments in one or more areas, such as cognition; language; memory; attention; reasoning; abstract thinking; judgment; problem solving; sensory; perceptual and motor abilities; psychosocial behaviour; physical functions; information processing; and speech. The term does not apply to brain injuries that are congenital or degenerative, or brain injuries induced by birth trauma (34 Code of Federal Regulations §300.7).

13. Developmental delay. "Developmental delay" means a student "who is experiencing developmental delays, as defined by the State and as measured by appropriate diagnostic instruments and procedures, in one or more of the following areas: physical development, cognitive development, communication development, social or emotional development, or adaptive development and who, by reason thereof, needs special education and related services" (34 Code of Federal Regulations §300.7[b][1][2], 300.313[b]).

Cross-national category B

4. Emotional disturbance. "Emotional disturbance" is defined as follows: *i)* The term means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational performance – *a)* An inability to learn that cannot be explained by intellectual, sensory, or health factors; *b)* An inability to build or maintain satisfactory interpersonal relationships with peers and teachers; *c)* Inappropriate types of behaviour or feelings under normal circumstances; *d)* A general pervasive mood of unhappiness or depression; or *e)* A tendency to develop physical symptoms or fears associated with personal or school problems. *ii)* The term includes schizophrenia. The term does not apply to children who are socially maladjusted, unless it is determined that they have a serious emotional disturbance (34 Code of Federal Regulations §300.7).

7. Specific learning disability. "Specific learning disability" means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not apply to children who have learning problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage (34 Code of Federal Regulations §300.7).

Cross-national category C

14. Title 1 – Disadvantaged students.

References

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Chapter 3

Analysis of the Quantitative Data Based on Categories Used Nationally

Background

This chapter analyses the data provided by countries in Tables 2, 3 and 4 of the electronic questionnaire (covering special schools, special classes and regular classes respectively) by national categories of disability, learning difficulties and disadvantages based on the resources definition given in Chapter 2. This analysis follows a similar format to that in the corresponding chapter in the earlier publication *Students with Disabilities, Learning Difficulties and Disadvantages: Statistics and Indicators* (OECD, 2005) which was based on the 2000/01 round of data collection. The main difference in structure from the previous version of the chapter is that here we discuss only data on students in compulsory education; data broken down by levels of education (pre-primary, primary, lower secondary and upper secondary) are presented in tables in Annex D.

The data are broken down by categories and presented as proportions of the total numbers of students in compulsory education, where there is typically the most complete information provided by countries. In addition, information is provided on the setting or location of these students' education, *i.e.* in regular classes, special classes or special schools, expressed as proportions of the total numbers of students in that category in the particular location.

The data in this chapter have been assembled in the full knowledge of the difficulty of making international comparisons on the basis of national categories. However, at the request of national representatives the analysis is carried out in order to keep touch with the basic data in the form in which they were presented, using terminology that many readers would follow more readily and to provide the context for comparisons made through cross-national categories A, B and C in Chapter 4. The method used to make the comparisons is outlined below. Table 2.1 provides background information revealing the inherent difficulty in making international comparisons. Firstly, not all countries use categorical models. Secondly, the categories that are used are not uniform across countries. Thirdly, the definitions of the categories, when available, vary among countries. It is of course partly for these reasons that the resources model and the cross-national categorisation system have been developed.

Methodology

In order to make the comparisons across the categories provided by countries, it is necessary to bring together the different national frameworks that exist. In order to do this, the definitions of the categories were carefully scrutinised and brought together according to the structure of the matrix given in the table in Annex A. The data classification displayed in this matrix was used to construct the comparative charts, given in the chapter. For example, columns 2 and 3 show national categories covering students who are blind or partially sighted. The data for Belgium (Flemish Community) shows a "6*x*" in column 2 and a "6*x*" in column 3. The "6" refers to the national category covering students who are blind or partially sighted (see Table 2.1) and the "*x*" indicates that for instance partially sighted

students are also included in the category "blind". This means that data cannot be shown separately for these two categories. This is in contrast, for instance, to Mexico where the data on partially sighted students are contained in their national category 2 and data for blind students in their national category 1. As the two columns reveal Mexico is the only country that returned data for 2003 to collect information on these two groups of students separately and Figure 3.1 has been constructed by bringing together the data for the two groups of students. Comparative charts are only presented if data are available for three or more countries. This means that although data are available for 22 categories only 13 of them allow for international comparisons.

Data on individual categories

Table 3.1 provides an overview of the data availability for each of the participating countries in terms of the 13 internationally comparable categories. As countries differ in the ways they categorise different types of disabilities, difficulties and disadvantages, many cells in the matrix are blank.

In what follows, data for each category are presented in two types of charts: firstly, in terms of the numbers of students in the category receiving additional resources to access the curriculum across the period of compulsory education as a proportion of the total number of students in compulsory education. The figures in these charts can therefore be seen as a proxy for the prevalence rate of each of these categories in each country. Data in these charts are ranked in ascending order. The second type of chart for each category focuses on where these students are educated: in regular classes, special classes or special schools. The charts show the proportion of students in each category receiving additional resources in each of the three settings. Country data in these charts are placed in descending order according to the proportions of students educated in regular classes.

The categories concerning blind and partially sighted students are presented together since the majority of countries do not keep separate data for the two individual categories. This also applies for the data on partially hearing and deaf students, and for those on students with severe and moderate learning problems. Data on aboriginal and indigenous students as well as young offenders' data are not analysed because two or less countries provide data on each of these categories. Data on gifted and talented students are not analysed because the educational issues and challenges regarding gifted and talented children would appear to be very different from those faced by DDD students.

The figures are based on full-time study. Data refer to the school year 2002/03, with the exception of Austria, Belgium (French Community), the Czech Republic, Hungary and the Slovak Republic, where data cover the period 2003/04. The figures are based on both public and private institutions.

From the point of view of making international comparisons, it is clear by glancing at Table 3.1 that such comparisons are difficult due to the inconsistent use of categories among countries. Only blind and partially sighted, deaf and partially hearing, physical disabilities, moderate/severe learning problems, and speech and language problems are used by ten or more countries. The remaining categories are used to varying degrees. All 13 categories are discussed in greater detail in the following sections. Median and inter-quartile ranges are given where six or more countries have comparable data. Otherwise, only ranges are provided and an indication given of the different extent of the numbers provided for.

Table 3.1. **Distribution of 13 internationally comparable categories by country**

	Visual impairment/blindness	Hearing impairment/deafness	Emotional, behavioural difficulties	Moderate and/or severe learning problems	Light learning problems	Physical Disabilities	Combinatorial disabilities	Specific learning difficulties	Speech and language problems	Hospital	Autism	Travelling children	Disadvantaged students
Austria	✓	✓		✓		✓		✓		✓			
Belgium (Fl.)	✓	✓	✓	✓	✓	✓		✓		✓		✓	
Belgium (Fr.)	✓	✓	✓	✓	✓	✓		✓		✓			
Czech Rep.	✓	✓		✓		✓	✓		✓	✓	✓		✓
Finland	✓	✓	✓	✓	✓	✓			✓		✓		
Germany	✓	✓	✓	✓		✓	✓	✓	✓	✓			
Greece	✓	✓		✓		✓							
Hungary	✓	✓		✓		✓	✓		✓		✓		
Japan	✓	✓		✓		✓			✓	✓			
Luxembourg			✓			✓							
Mexico	✓	✓		✓		✓	✓	✓				✓	
Netherlands	✓	✓		✓		✓	✓		✓				
Slovak Rep.	✓	✓		✓		✓	✓	✓	✓	✓	✓		✓
Spain	✓	✓	✓	✓		✓	✓	✓		✓		✓	✓
Turkey	✓	✓		✓		✓			✓		✓		
United States	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓		
Chile	X					✓			✓				

It should be noted that every effort has been made to avoid double counting and that, in some cases, proportions may be underestimated because of missing data.

Description by category

Blind and partially sighted

The statistics on the categories covering blind and partially sighted students are treated separately only in Mexico; in the rest of the countries they are brought together as a single category which is used for reporting the data here.

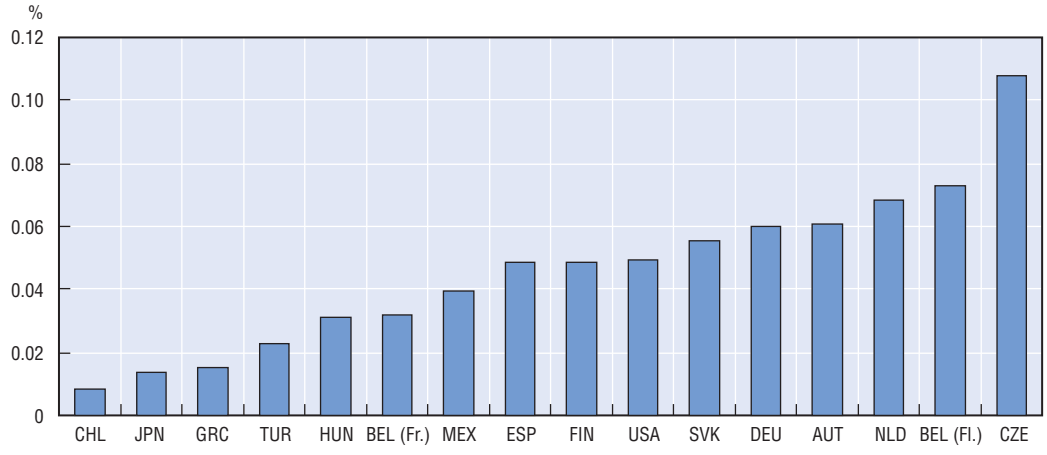
As can be seen from Figure 3.1 the proportion of blind and partially sighted students receiving additional resources varies substantially from country to country. The lowest percentage being in Chile (CHL) (0.008%), and the highest in the Czech Republic (0.11%). This means that some countries register in their education statistics proportionally about 14 times more than others. When the highest and the lowest figures are ignored, a considerable difference remains with Belgium (Flemish Community) (0.07%) registering nearly five times as many as Japan (0.014%). The median percentage of blind and partially sighted students in primary and lower secondary education is 0.049% with an inter-quartile range of 0.03 to 0.06.

Figure 3.2 shows where these students are educated (regular classes, special classes or special schools). It shows that five countries use regular classes, special classes and special schools; the Czech Republic, Japan, the Slovak Republic, Turkey, and the United States. With the exception of the latter, only a small minority of students are educated in special classes.

Eight countries have a binary system dividing these students between regular classes and special schools: Austria, Belgium (Flemish Community), Finland, Germany, Hungary,

Figure 3.1. **Numbers of blind and partially sighted students by country receiving additional resources as a percentage of all students in compulsory education**

2003

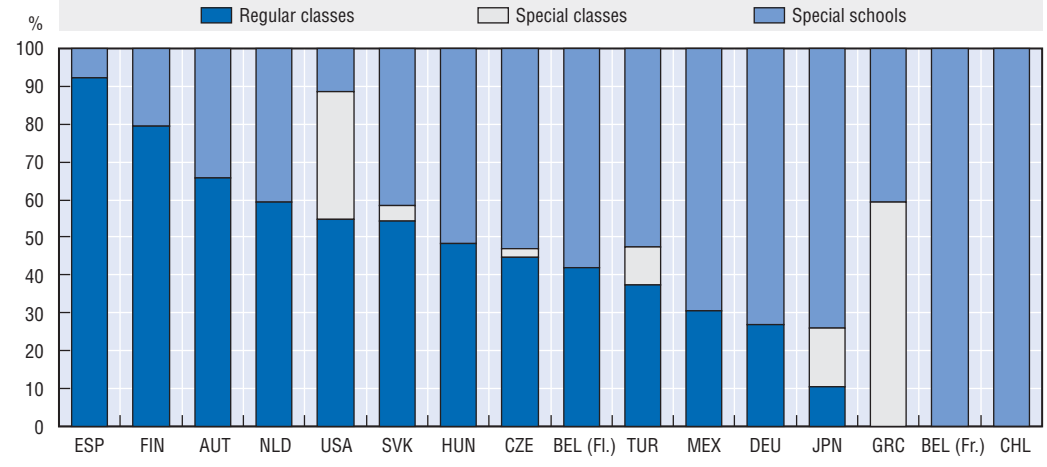


StatLink http://dx.doi.org/10.1787/105663828044

Notes: Data for regular classes in Belgium (French Community) and Greece are not available.

Figure 3.2. **Percentages of blind and partially sighted students receiving additional resources in compulsory education by location**

2003



StatLink http://dx.doi.org/10.1787/105673166146

Notes:
Data for special classes in Austria, Germany and Spain are included in special schools.
Data for special classes in Finland are included in regular classes.
Data for regular classes in Belgium (French Community) and Greece are not available.
Data for special classes in Hungary are negligible.

Mexico, the Netherlands, and Spain. Greece also uses a binary system, but students are split between special schools and special classes, as data for regular classes are not available. Countries differ significantly however in terms of the proportions of students in each setting, with Spain, at one extreme, educating the vast majority in regular classes and Germany, at the other extreme, placing around 75% in special schools. Finally, two countries, Belgium (French Community) and Chile, report that all blind and visually

impaired students receiving additional resources are educated in special schools, although it is worth pointing out that data for regular classes in Belgium (French Community) are not available.

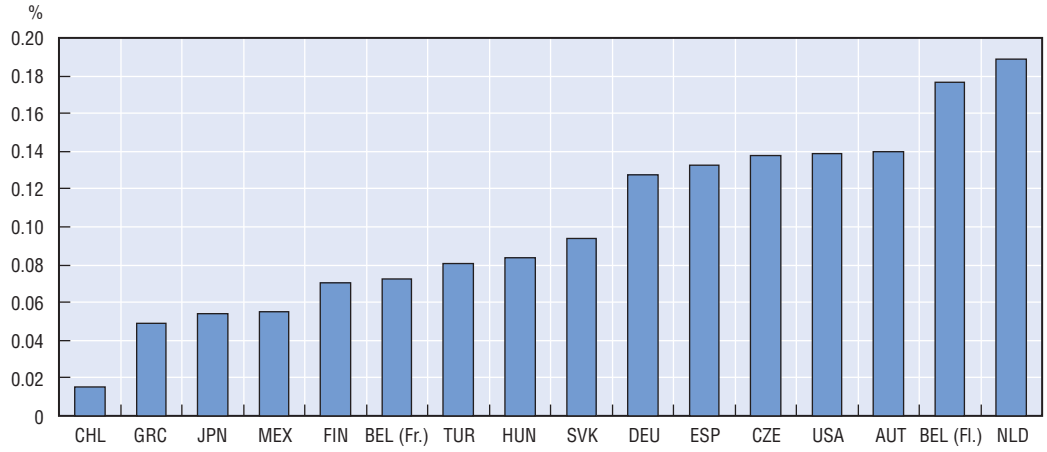
Deaf and partially hearing

As for blind and partially sighted students, the statistics gathered on categories covering deaf and partially hearing pupils are treated separately in only two countries (Mexico and the Netherlands). In most countries, they are treated as a single entity and this method is adopted here.

As can be seen from Figure 3.3, the proportion of deaf and partially hearing students registered in educational statistics varies substantially from country to country. The lowest percentage being Chile at 0.02% and the highest, the Netherlands (0.19%). This means that some countries register proportionally four times as many as others. The median percentage of deaf and partially hearing students in compulsory education is 0.09% with an inter-quartile range of 0.07 to 0.14.

Figure 3.3. **Numbers of deaf and partially hearing students by country, as a percentage of all students in compulsory education**

2003



StatLink http://dx.doi.org/10.1787/105712680425

Notes: Data for regular classes in Belgium (French Community) and Greece are not available.

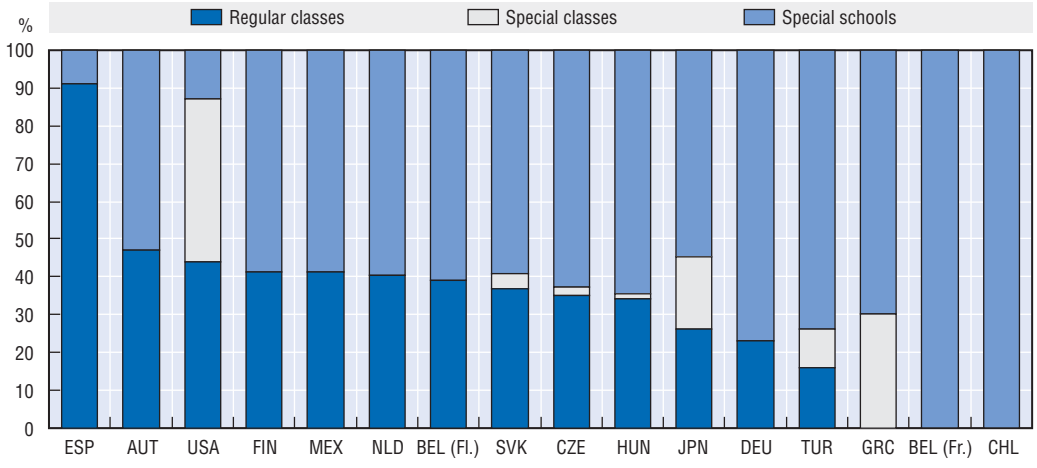
Figure 3.4 shows how variable the placement of these students is among countries. It reveals that six countries divide deaf and hearing impaired pupils among regular classes, special classes and special schools: the Czech Republic, Hungary, Japan, the Slovak Republic, Turkey, and the United States. Seven countries have a binary system. Regular classes and special schools are used in Austria, Belgium (Flemish Community), Finland, Germany, Mexico, the Netherlands and Spain, while Greece uses special schools and special classes (data on regular classes are not available). Finally, Chile educates all deaf and partially hearing students receiving additional resources in special schools.

Emotional and/or behavioural difficulties

It is of interest to note that given the apparent rise in the numbers of students described as having behaviour difficulties, not all countries use such a category. For those

Figure 3.4. **Percentages of deaf and partially hearing students receiving additional resources in compulsory education by location**

2003



StatLink http://dx.doi.org/10.1787/105742421353

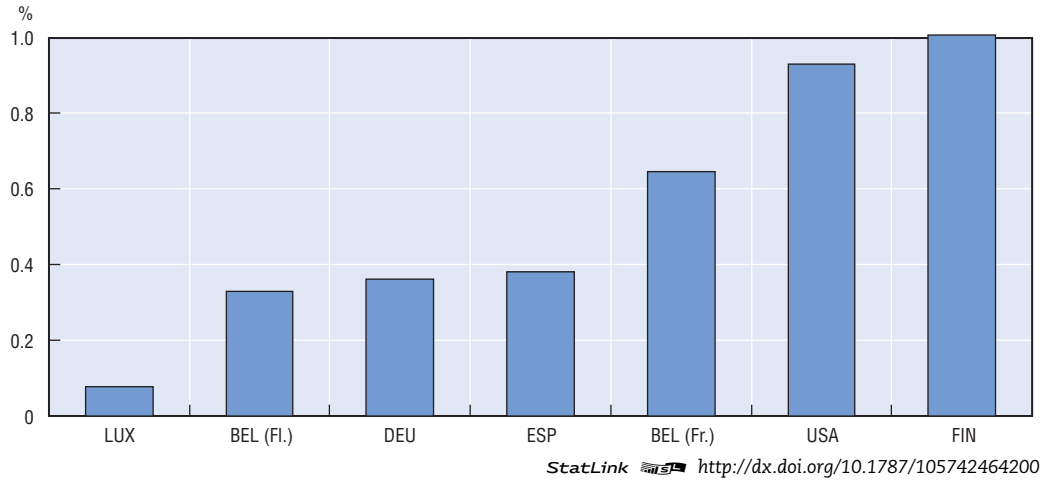
Notes:
Data for special classes in Austria, Germany and Spain are included in special schools.
Data for special classes in Finland are included in regular classes.
Data for regular classes in Belgium (French Community) and Greece are not available.

who do, there is evidence for a greater differentiation in terms of location than in the two preceding clusters of categories.

As can be seen from Figure 3.5 the proportion of students with emotional and behavioural difficulties varies substantially from country to country, with Finland (1.7%) recognising proportionally over twenty times more than Luxembourg (0.078%). The median percentage of students with emotional and/or behavioural difficulties in compulsory education is 0.37% with an inter-quartile range of 0.36 to 0.78.

Figure 3.5. **Numbers of students with emotional and/or behavioural difficulties by country, as a percentage of all students in compulsory education**

2003



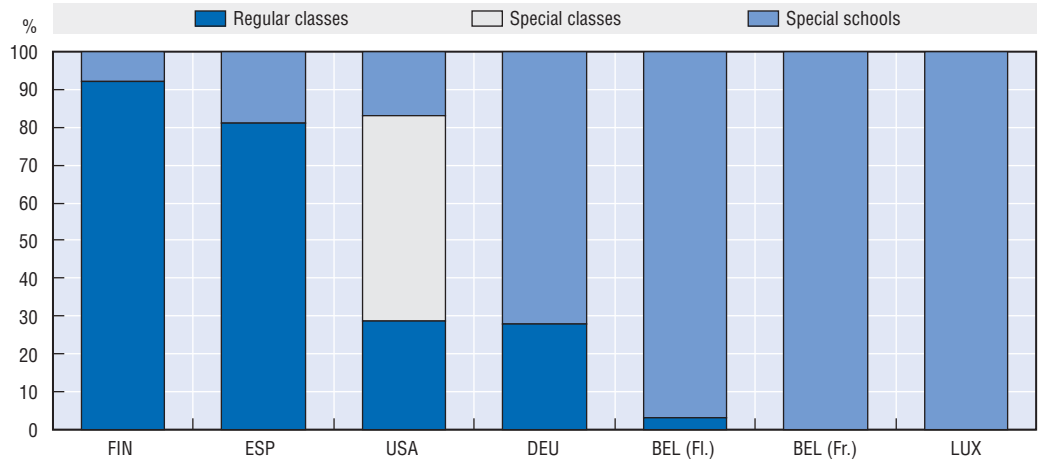
StatLink http://dx.doi.org/10.1787/105742464200

Notes: Data for regular classes in Luxembourg are not available.

Figure 3.6 shows the variety of placements offered and indicates that the United States is the only country to use regular classes, special classes and special schools (28.8%, 54.4%, and 16.8% respectively). Belgium (French Community and Luxembourg) use only special schools for these students, although the data for regular classes are missing. The rest of the countries use two locations, regular classes and special schools, although there is considerable variation in the proportions in the different locations. In Finland, over 90% of students with emotional and/or behavioural difficulties are educated in regular classes while in Belgium (Flemish Community) nearly all of them are in special schools.

Figure 3.6. **Percentages of students with emotional and/or behavioural difficulties receiving additional resources in compulsory education by location**

2003



StatLink http://dx.doi.org/10.1787/105855643065

Notes:
Data for special classes in Germany and Spain are included in special schools.
Data for regular classes in Luxembourg are not available.

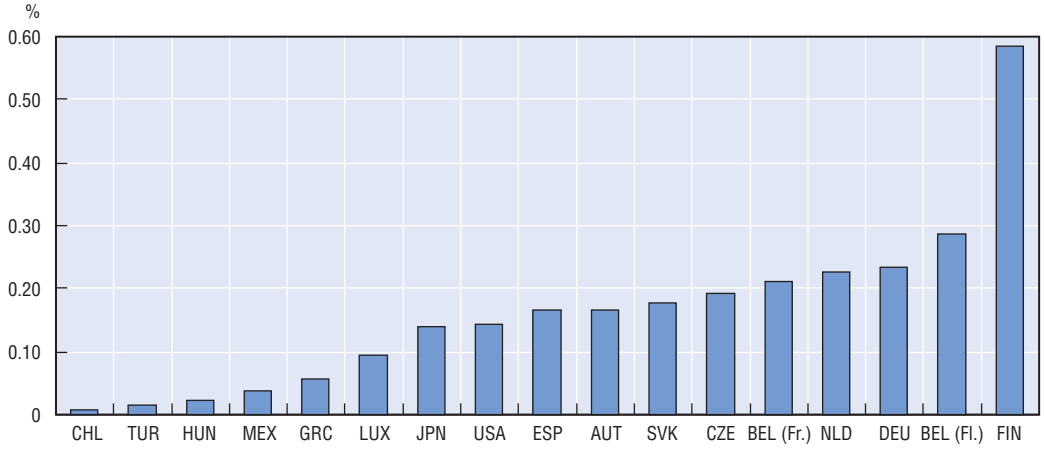
Physical disability

It is readily observable from Figure 3.7 that there is great variation in the proportion of students with physical disabilities receiving additional resources in all countries. Finland (0.59%) has the highest percentage, while the lowest is in Chile (0.006%) which means that proportionally Finland registers nearly a thousand times as many students as Chile. Even if the most extreme countries are not considered, Belgium (Flemish Community) (0.29%) registers 18 times more than Turkey (0.016%). The median percentage of physically disabled students in compulsory education is 0.16% with an inter-quartile range of 0.05 to 0.21.

Figure 3.8 shows how variable the placement of these students is among countries. Four countries use all three locations, regular classes, special classes and special schools: the Czech Republic, Hungary, the Slovak Republic and the United States. Eight countries have systems which distribute these students between regular classes and special schools: Austria, Belgium (Flemish Community), Finland, Germany, Mexico, the Netherlands, Spain and Turkey. Greece and Japan use special classes and special schools, although in the case of the former it is worth remembering that data for regular classes are not available. Finally, Chile educates all students receiving additional resources for physical disabilities at special

Figure 3.7. **Numbers of students with physical disabilities by country as a percentage of all students in compulsory education**

2003

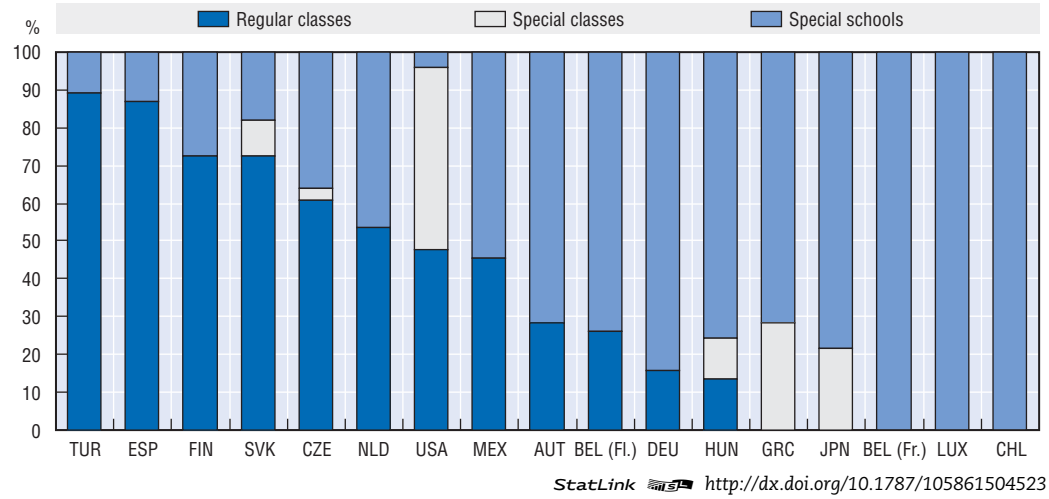


StatLink http://dx.doi.org/10.1787/105855643065

Notes: Data for regular classes in Greece and Luxembourg are not available.

Figure 3.8. **Numbers of students with physical disabilities receiving additional resources in compulsory education by location**

2003



StatLink http://dx.doi.org/10.1787/105861504523

Notes:
Data for special classes in Finland are included in regular classes.
Data for special classes in Austria, Germany and Spain are included in special schools.
Data for regular classes in Belgium (Fr.), Greece and Luxembourg are not available.

schools. Belgium (French Community) and Luxembourg also appear to educate all these students in special schools, but data for regular classes in these countries are missing.

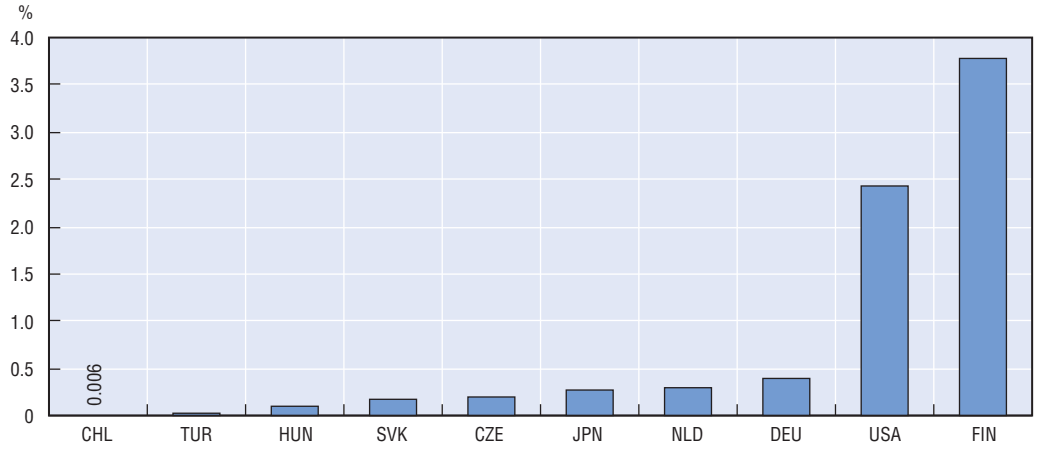
There is therefore significant variation in terms of the location of these students, with a few countries educating all or a large majority of them in special schools (*e.g.* Belgium [French Community], Germany, and Chile), while others using mostly regular classes (*e.g.* Turkey, Spain and Finland). At the extremes the location of education varies considerably.

Speech and language problems

As can be seen from Figure 3.9, the percentages of students registered with speech and language problems also vary substantially from country to country, the lowest percentage being in Chile (0.008%) and the highest in Finland (3.77%). This means that the latter registers proportionally more than 600 times as many as the former. If the extremes are ignored, the variation is reduced but still remains substantial with the United States (2.42%) registering 134 times more than Turkey (0.018%). The median percentage of students with speech and language problems in primary and lower secondary education is 0.23% with an inter-quartile range of 0.10 to 0.37.

Figure 3.9. **Numbers of students with speech and language problems by country as a percentage of all students in compulsory education**

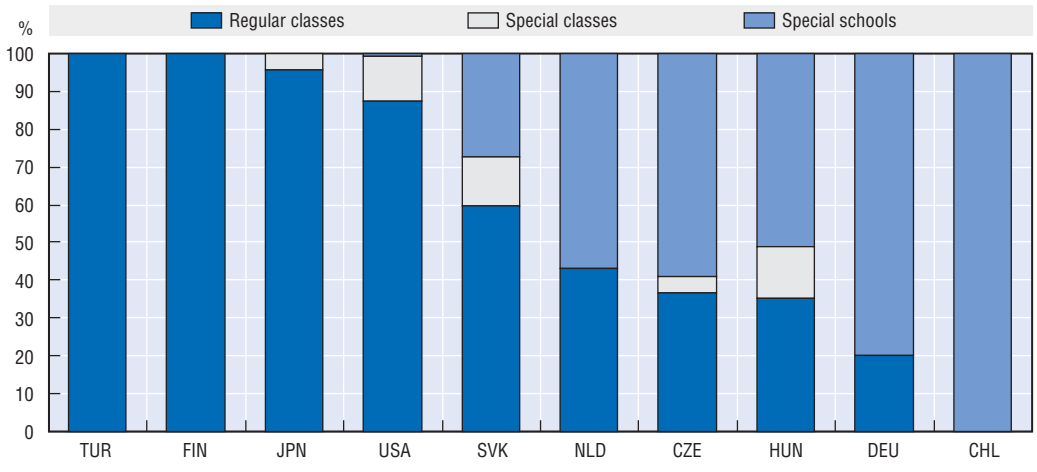
2003



StatLink http://dx.doi.org/10.1787/105861504523

Figure 3.10. **Percentages of students with speech and language problems receiving additional resources in compulsory education by location**

2003



StatLink http://dx.doi.org/10.1787/105887506610

Figure 3.10 shows where these students are being educated (regular classes, special classes or special schools). Four countries use regular classes, special classes and special schools: the Czech Republic, Hungary, the Slovak Republic and the United States.

Three countries use only two locations: regular classes and special schools are used in Germany and the Netherlands whereas Japan uses special classes and regular classes. Finally, Finland and Turkey educate all these students in regular classes, whereas Chile only uses special schools.

On the whole, two different approaches can be identified: one with the countries where the majority of students are educated in special schools, another where more than 60% of the students are in regular classes.

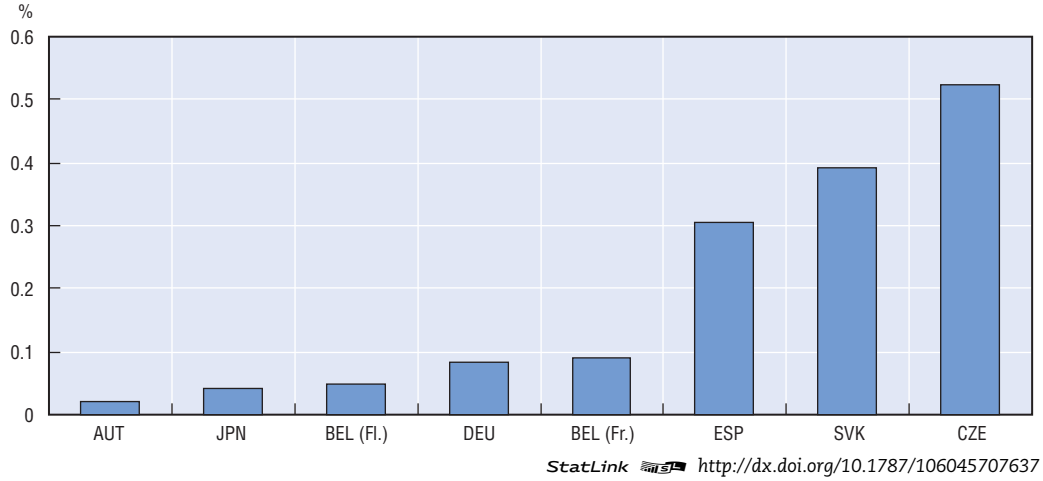
Hospital

As can be seen from Figure 3.11, the percentage of students registered as receiving education while hospitalised varies substantially from country to country; the lowest percentage being in Austria (0.02%) and the highest in the Czech Republic (0.52%). This means that some countries register proportionally 43 times as many as others. However, if the extremes are ignored the differences are considerably reduced, with the Slovak Republic resourcing almost ten times more hospitalised students than Japan. The median percentage of these students in compulsory education is 0.09% with an inter-quartile range of 0.05 to 0.33.

Figure 3.12 on the other hand shows how variable the placement is among countries. The chart shows that six countries use one location only, either special schools or regular schools. The data thus confirm the wide variety of provision which is used for these students. In Belgium (Flemish Community), students are in the so-called "hospital schools" for a limited period of time; in the meantime they remain also registered in their usual place of education. Countries who use two locations are Japan, which places these students in special classes (37%) and special schools (63%), and the Slovak Republic which also uses special schools and special classes with 97.6% of the students in special schools.

Figure 3.11. **Numbers of students in hospitals by country as a percentage of all students in compulsory education**

2003

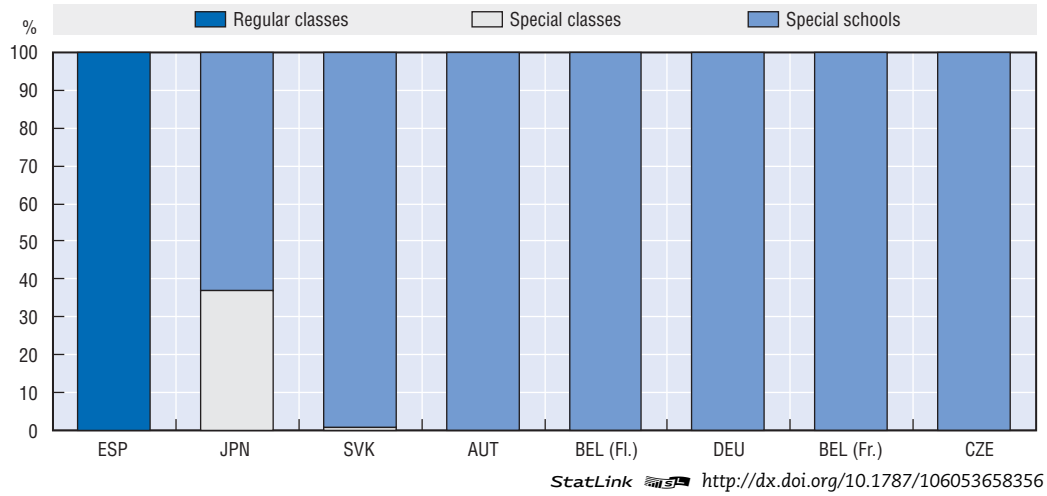


StatLink http://dx.doi.org/10.1787/106045707637

Notes: Data for regular classes in Belgium (French Community) are not available.

Figure 3.12. **Percentages of students in hospitals receiving additional resources in compulsory education by location**

2003



StatLink http://dx.doi.org/10.1787/106053658356

Notes:
Data for special classes in Austria and Germany are included in special schools.
Data for regular classes in Belgium (French Community) are not available.
Data for regular classes in Germany are negligible.
Data for special schools in Spain are negligible.

Combinatorial disabilities

Combinatorial disabilities is a term that has been coined by the Secretariat to avoid the confusion in an earlier monograph over the use of the term "multiple disability" which in the United States is a legally defined category but which is too precisely defined to cover the range of students included in the "combinatorial" category used here.

Figure 3.13 shows that again the proportions of students in this category vary substantially from country to country. The lowest percentages are found in Hungary and Germany (0.05 and 0.06%) and the highest in the Czech Republic (0.36%). This means that some countries register in educational statistics proportionally seven times as many as others do. The median percentage of students with combinatorial disabilities in primary and lower secondary education is 0.22% with an inter-quartile range of 0.07 to 0.24.

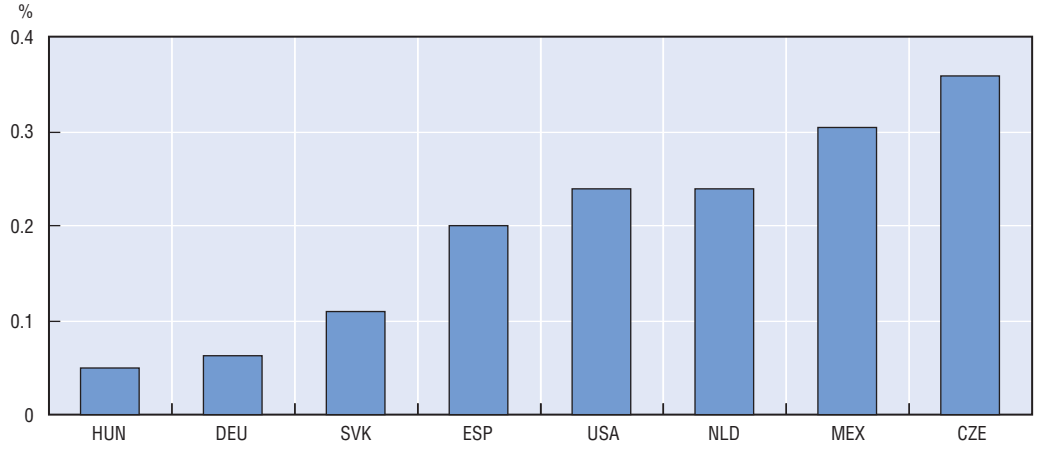
Figure 3.14 illustrates how variable the placement is among countries and shows that three countries have systems which use regular classes, special classes and special schools: the Czech Republic, Hungary and the United States. The rest of the countries use a binary system, with either regular classes and special schools (Germany, Mexico, The Netherlands and Spain) or special schools and special classes (the Slovak Republic).

Autism

The worldwide interest in the topic of autism is revealed in the growing number of countries who use this as a separate category to gather statistics. Figure 3.15 shows the variation between them. The United States stands out with students with autism receiving additional resources representing 0.24% of the school population over the period of compulsory education, 24 times more than Turkey (0.01%). The median percentage of students with autism in compulsory education is 0.04% with an inter-quartile range of 0.02 to 0.1.

Figure 3.13. **Numbers of students with combinatorial disabilities by country as a percentage of all students in compulsory education**

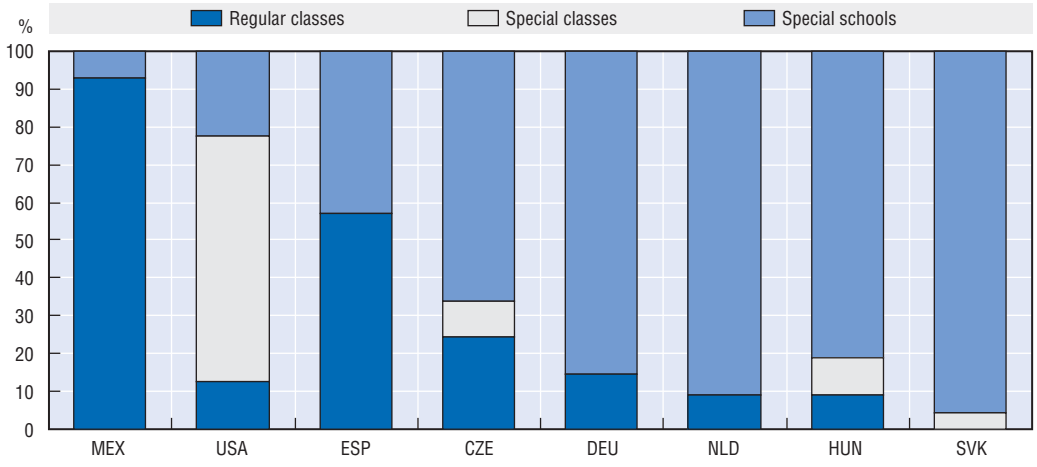
2003



StatLink http://dx.doi.org/10.1787/106072082416

Figure 3.14. **Percentages of students with combinatorial disabilities receiving additional resources in compulsory education by location**

2003



StatLink http://dx.doi.org/10.1787/106145415480

Notes: Data for special classes in Germany and Spain are included in special schools.

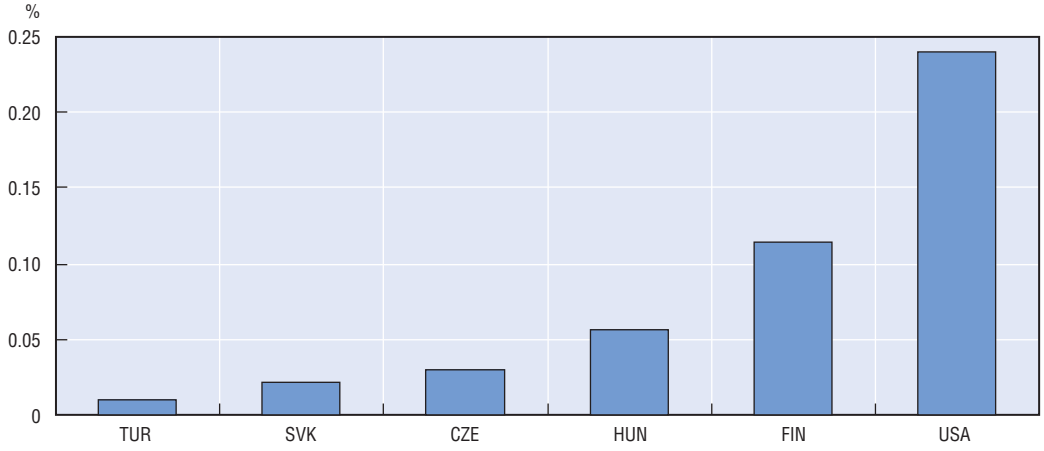
Figure 3.16 shows where these students are being educated. There seems to be no overall pattern in provision, with countries varying to a large extent over where they educate students with autism. Finland educates the majority of these students (74%) in regular classes, while the Czech Republic and the Slovak Republic educate most of them in special schools (96% and 79% respectively). Special classes are also used by five out of the six countries, with the United States using them for the majority of students with autism (63%).

Severe and/or moderate learning problems

Figure 3.17 shows the proportions of resourced students with severe and/or moderate learning problems by country. The variations across countries are considerable. Greece presents the lowest percentage (0.28%) and the Slovak Republic the highest (3.03%). This

Figure 3.15. **Numbers of students with autism by country as a percentage of all students in compulsory education**

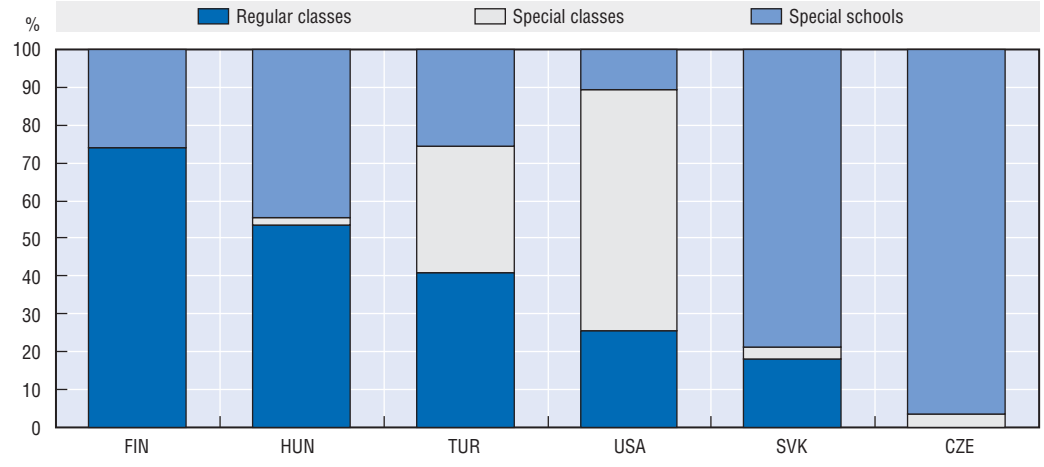
2003



StatLink http://dx.doi.org/10.1787/106163630135

Figure 3.16. **Percentages of students with autism receiving additional resources in compulsory education by location**

2003



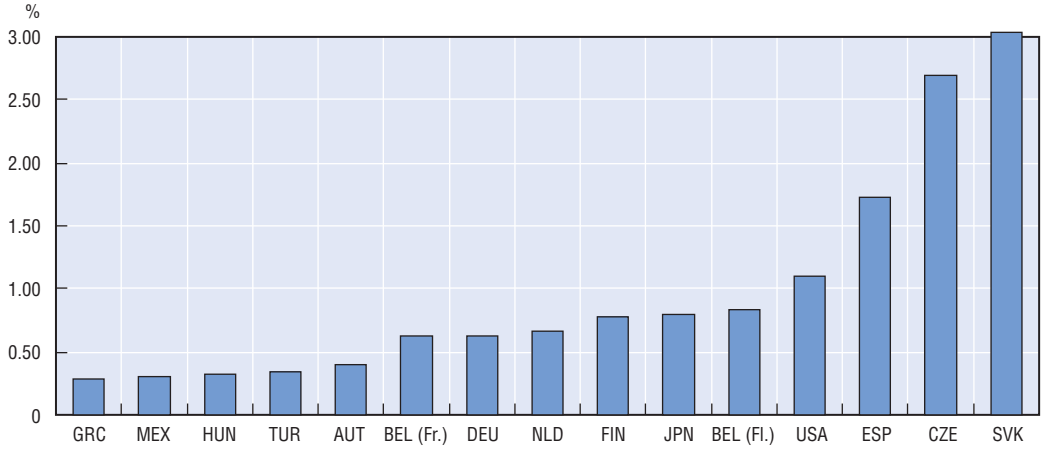
StatLink http://dx.doi.org/10.1787/106207162016

means that the Slovak Republic registers proportionally more than 10 times as many as Greece. The median percentage of students with severe and/or moderate problems in compulsory education is 0.65% with an inter-quartile range of 0.36 to 0.96.

Figure 3.18 shows where these students are being educated (regular classes, special classes or special schools). Five countries presented here make use of all three locations (regular classes, special classes and special schools): the Czech Republic, Hungary, the Slovak Republic, Turkey, and the United States. In most countries, the majority of these students are educated in special provision (schools or classes), with only Spain educating most of them (90%) in regular classes, followed by Turkey (60%). Several countries educate all or virtually all students with moderate and/or severe learning problems in special

Figure 3.17. **Numbers of students with severe and/or moderate learning problems by country as a percentage of all students in compulsory education**

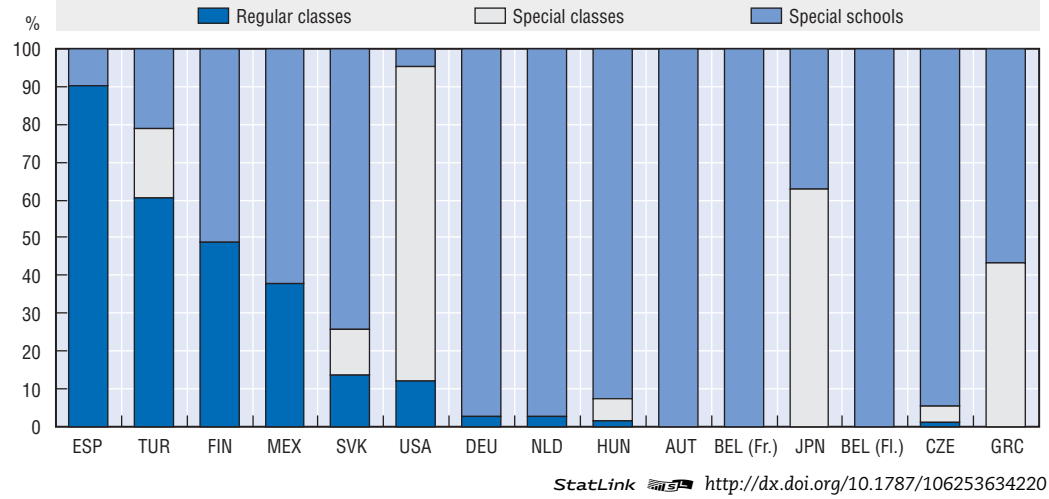
2003



StatLink http://dx.doi.org/10.1787/106216727042

Figure 3.18. **Percentages of students with severe and/or moderate learning problems receiving additional resources in compulsory education by location**

2003



StatLink http://dx.doi.org/10.1787/106253634220

Notes:
Data for special classes in Germany and Spain are included in special schools.
Data for special classes in Finland are included in regular classes.

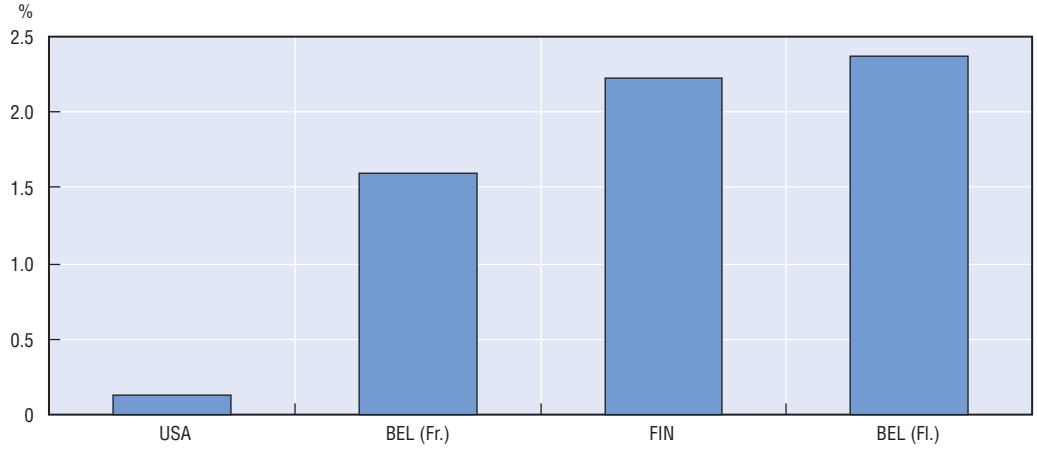
schools: Austria, Belgium (French Community), Belgium (Flemish Community), the Czech Republic, Germany, Hungary and the Netherlands.

Light learning problems

In general, little information was provided for this category and Figure 3.19 shows the data from the countries that did. They indicate large variations in the proportions of students resourced. Proportionally, Belgium (Flemish Community) (2.37%) resources 18 times more students with light learning problems than the United States (0.13%). In

Figure 3.19. **Numbers of students with light learning problems by country as a percentage of all students in compulsory education**

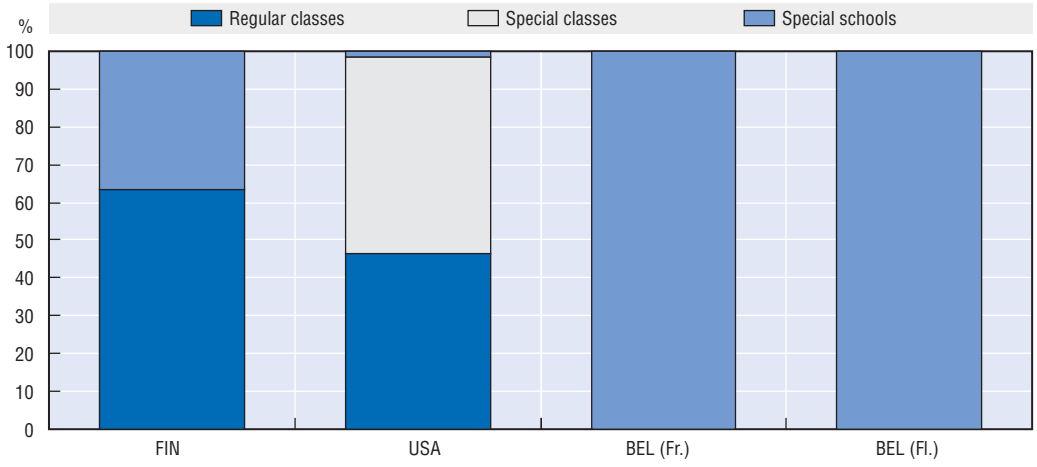
2003



StatLink http://dx.doi.org/10.1787/106260708432

Figure 3.20. **Percentages of students with light learning problems receiving additional resources in compulsory education by location**

2003



StatLink http://dx.doi.org/10.1787/106268062681

1. Data for special classes in Finland are included in those for regular classes.

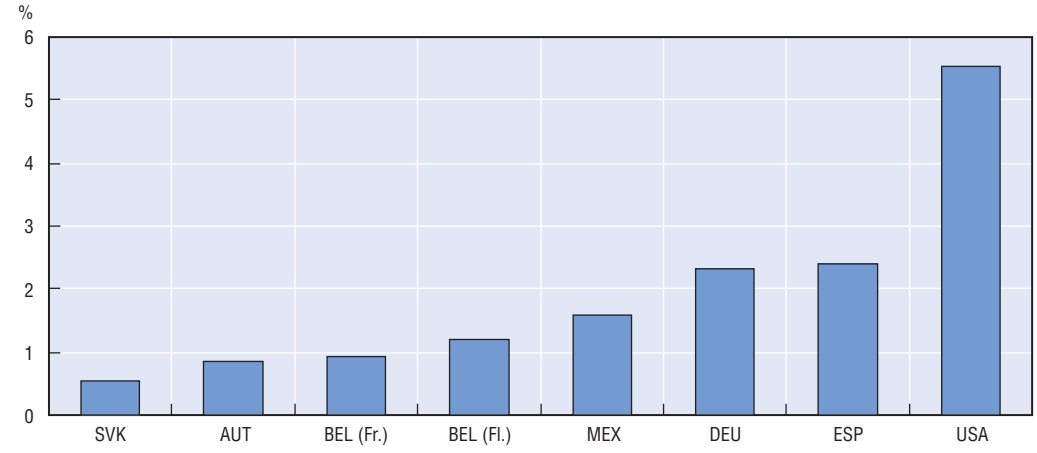
addition, the location of education varies considerably among the countries providing data, with Finland and the United States educating 63% and 46% of these students in regular classes respectively in contrast to Belgium (Flemish Community and French Community) in which all are in special schools (Figure 3.20).

Specific learning difficulties

Figure 3.21 shows that, as for many of the other categories, there is substantial variation among countries in the proportions of students resourced with specific learning difficulties. The highest proportion is in the United States (5.54%) who registers proportionally 10 times as many as the Slovak Republic (0.53%). The median percentage of students with specific learning difficulties in compulsory education is 1.41% with an inter-quartile range of 0.91 to 2.34.

Figure 3.21. **Numbers of students with specific learning difficulties by country as a percentage of all students in compulsory education**

2003

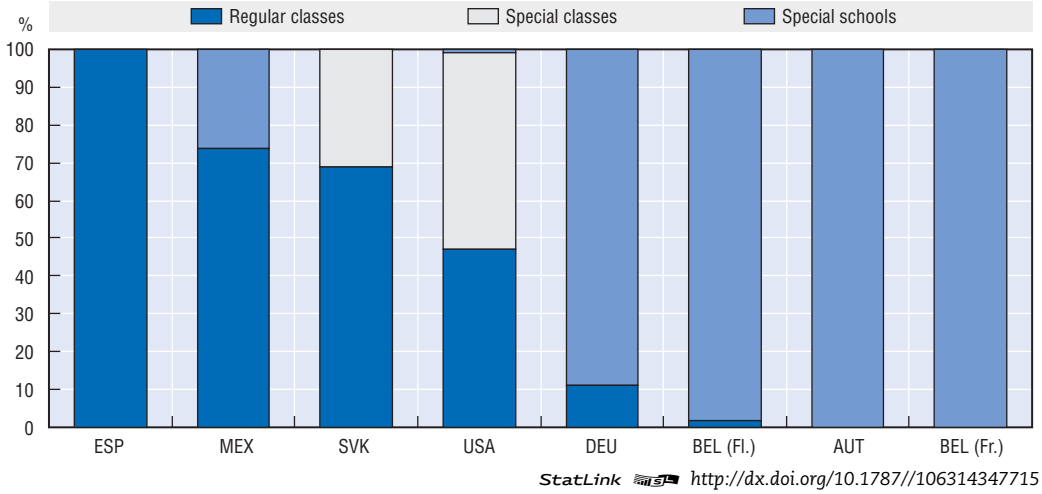


StatLink http://dx.doi.org/10.1787/106277608215

Notes: Data for regular classes in Austria are not available.

Figure 3.22. **Numbers of students with specific learning difficulties by location as a percentage of all students with specific learning difficulties in primary and lower secondary education**

2003



StatLink http://dx.doi.org/10.1787//106314347715

Notes:
Data for special classes in Austria are included in special schools.
Data for regular classes in Austria are not available.
Data for special classes in Germany and Spain are included in special schools.

Figure 3.22 shows where these students are being educated (regular classes, special classes or special schools). The United States is the only country to use all three locations (46.9%, 52.1%, and 0.9% in regular classes, special classes and special schools, respectively). Spain educates all of these students in regular classes, while Austria, Belgium (French Community), Belgium (Flemish Community) and Germany educate all or most of them in special schools. Mexico and the Slovak Republic use mostly regular classes and, to a lesser extent, special schools or classes respectively.

Categories related to disadvantage

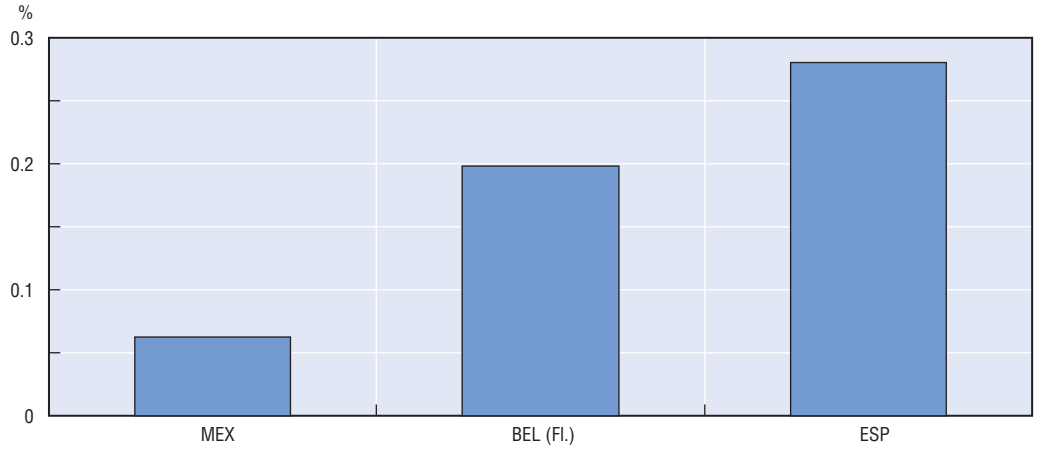
The analysis presented in the following section is based on data on national categories related to disadvantage where common categories could be provided for making international comparisons. Only two such categories emerged: students from travelling families and disadvantaged students.

Travelling students

Figure 3.23 shows the countries providing data for this category with Spain (0.28%) resourcing proportionally nearly five times as many students as Mexico (0.06%).

Figure 3.23. **Numbers of travelling students by country as a percentage of all students in compulsory education**

2003

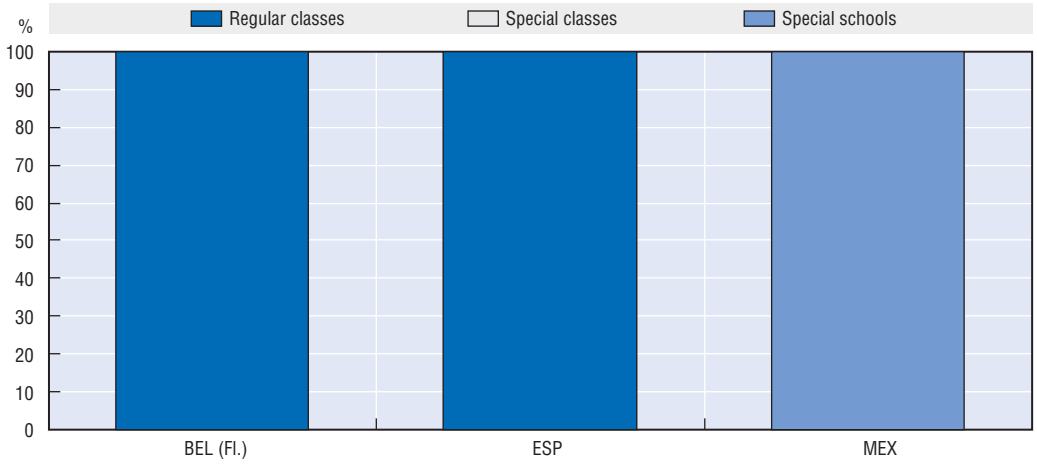


StatLink http://dx.doi.org/10.1787/106342088504

Notes: Data for regular classes in Mexico are not available.

Figure 3.24. **Percentages of travelling students receiving additional resources in compulsory education by location**

2003



StatLink http://dx.doi.org/10.1787/106387160517

Notes: Data for regular classes in Mexico are not available.

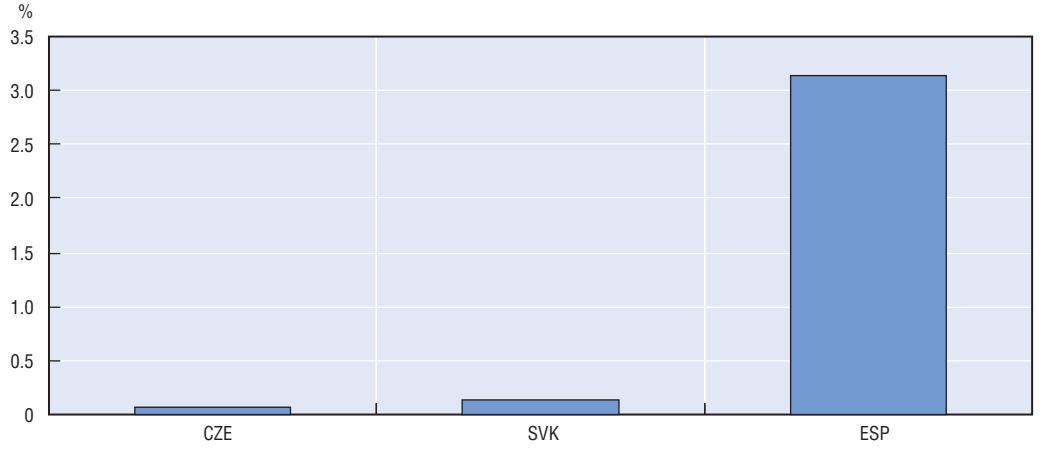
Figure 3.24 shows that the location of education varies between regular classes and special schools. Belgium (Flemish Community) and Spain use only regular classes while Mexico uses only special schools.

Disadvantaged students

Figure 3.25 shows the countries providing data for this category. They indicate large variations in the proportions of students resourced, with Spain resourcing 3.1% of students in compulsory education, against the Czech Republic that resources 0.06%. Figure 3.26 shows that the three countries where data are available also differ widely in terms of the location where they educate disadvantaged students, with Spain educating all of them in regular classes, the Slovak Republic in special classes and the Czech Republic in special schools.

Figure 3.25. **Numbers of disadvantaged students by country as a percentage of all students in compulsory education**

2003

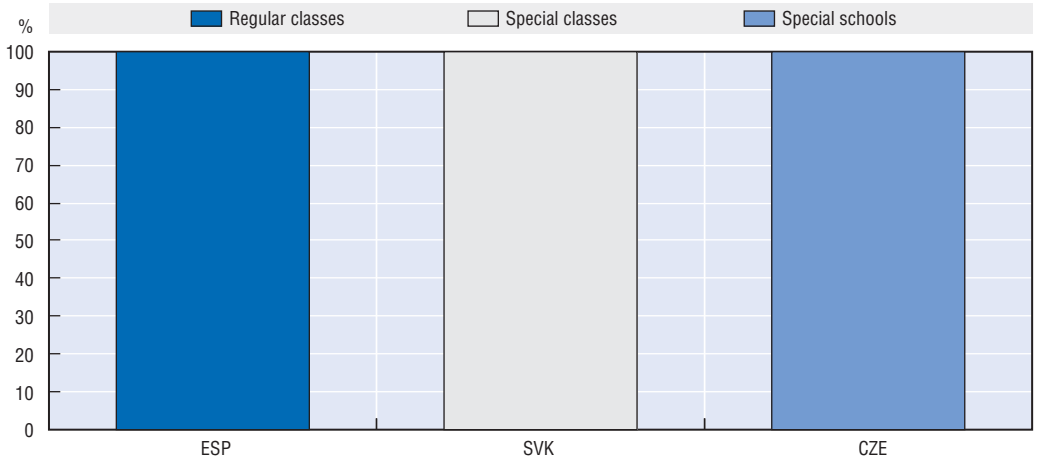


StatLink http://dx.doi.org/10.1787/106438081242

Notes: Data for regular classes in the Czech Republic are not available.

Figure 3.26. **Percentages of disadvantaged students receiving additional resources in compulsory education by location**

2003



StatLink http://dx.doi.org/10.1787/106438081242

Notes: Data for regular classes in the Czech Republic are not available.

Conclusions

This chapter has considered the data based on the national categories used to provide additional resources for students having difficulties accessing the curriculum as supplied by participating countries. It has looked at the proportions registered in educational statistics by category and by location of education. The data show substantial variation in categories used by countries and in the country prevalence rates for the school years covering compulsory education. Furthermore, the location of education (regular schools, special classes, or special schools) varies greatly from country to country. For almost all categories at the extremes the education experiences of similar students would be very different in different countries. For instance, in one they might be educated in regular classes while in another they may be fully segregated from mainstream education.

Because of the different definitions in use of national categories for these students, the present study has adopted a simplified tri-partite cross-national categorisation, referred to as A, B and C within the context of a resources model which has been outlined in previous chapters. The following chapters use this framework to describe the remainder of the data gathered by the quantitative part of the instrument.

General notes

Switzerland: Swiss data were provided in a form different from that of other countries, as they are grouped primarily by location (special school or classes) rather than disability, difficulty or disadvantage categories (see Table 2.1). As such, it was not possible to include Swiss data in this part of the analysis.

United Kingdom (England): The United Kingdom (England) only provides data for two categories: students with statements (records) of special educational needs and students without statements (records) of special educational needs. As these categories are not comparable with those of other countries, the United Kingdom is not included in this part of the analysis.

References

OECD (2005) *Students with Disabilities, Learning Difficulties and Disadvantages: Statistics and Indicators*, Paris, OECD.

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Policies, Statistics and Indicators
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Chapter 4

Analysis of the Quantitative Data for Cross-national Categories A, B and C

Background

This analysis follows an identical format to that in the corresponding chapter in the earlier printed monographs *Equity in Education: Students with Disabilities, Learning Difficulties and Disadvantages* (OECD, 2004) and *Students with Disabilities, Learning Difficulties and Disadvantages: Statistics and Indicators* (OECD, 2005) which were based on the 1998/9 and 2000/01 rounds of data collection respectively. It is restricted to data from the 2003 data collection exercise.

As in the earlier data collections (see also *Special Needs Education: Statistics and Indicators* [OECD, 2000]), the amount of information which countries were able to provide varied widely from country to country in the present 2003 data collection. There continues to be an overall trend for the most detailed information to be available about provision in special schools, for substantially less information about special classes in regular or mainstream schools, and for there to be very patchy data on students fully integrated in regular classes in regular schools.

The three cross-national categories correspond broadly to students with ***disabilities*** (A); students with learning or behaviour ***difficulties*** (B); and those with social ***disadvantages*** (C) (see Chapter 1). To avoid extensive repetition of the clumsy "students within cross-national category", the terms disabilities, difficulties, and disadvantages are frequently used in this chapter as synonyms for the three cross-national categories. As previously, there are more extensive and reliable data for students with disabilities (relating broadly to what might be called organic defects of the sensory, motor, or neurological systems) than for those with difficulties or disadvantages.

The chapter is divided into sections covering each of the cross-national categories in turn. Within each section there is an initial discussion of data on students receiving additional resources over the period of compulsory education. This is followed by discussion of data on the various phases of education in turn (*i.e.* pre-primary, primary or basic school education, lower secondary education, and upper secondary education).

Comparisons between the data for the different cross-national categories are not addressed in this chapter. They form the basis of Chapter 5.

Availability of data

The table in Annex B illustrates the availability of data for the cross-national categories for different countries, split according to the location of education (special schools, special classes and regular classes) and its level or phase (compulsory education, pre-primary, primary, lower secondary and upper secondary). As discussed above, considerable gaps in data availability remain, particularly for categories B and C.

In all charts, countries are ranked in ascending order either in terms of overall percentages or in terms of their proportion of students in regular classes.

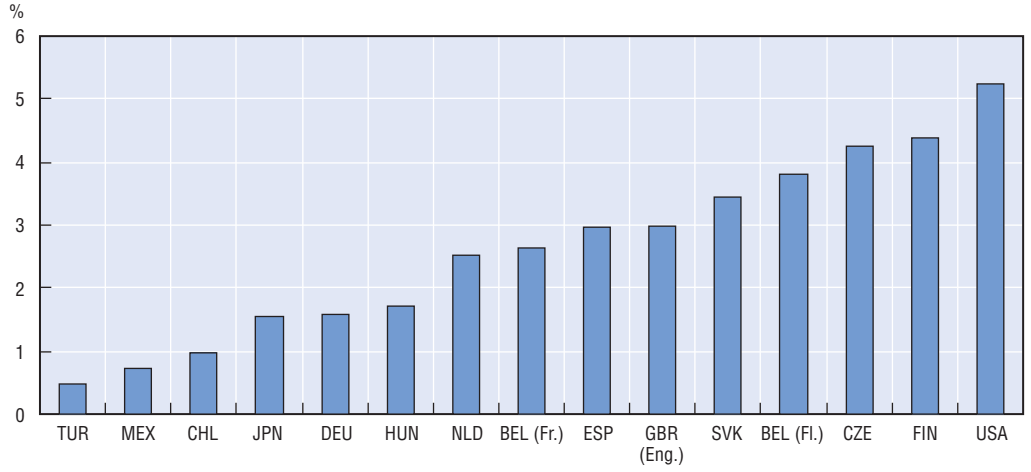
Quantitative data on cross-national category A (students receiving additional resources for disabilities)

Cross-national category A, as discussed and defined in Chapter 1, roughly corresponds to needs arising from impairing conditions. All countries using categorical systems for special educational needs have national categories which they consider to fall within cross-national category A, although the number of such categories varies widely from country to country (see Table 2.1 in Chapter 2).

The period of compulsory education

Figure 4.1 shows the number of students receiving additional resources within the period of compulsory education who are considered to fall within cross-national category A for different countries, as a percentage of all students in compulsory education (the period of compulsory education differs from country to country – see Annex C). Values range from 0.49% (Turkey) to 5.25% (the United States). The median number of students receiving additional resources for disabilities, for the fifteen countries reporting full data, as a percentage of all students in compulsory education is 2.63%, with an inter-quartile range of 1.26% to 3.62%.

Figure 4.1. **Number of students receiving additional resources over the period of compulsory education in cross-national category A as a percentage of all students in compulsory education, 2003**



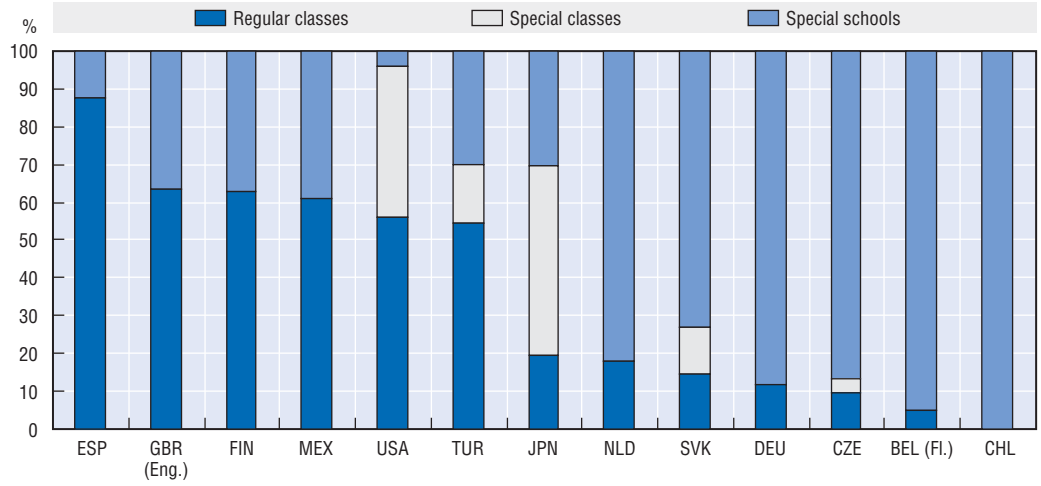
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Although wide variation continues to exist between countries in terms of students receiving additional resources for disabilities, the differences are substantially less than the differences between countries for some individual categories discussed in the previous chapter. This again confirms the use of an overall disability category as part of the tri-partite approach and increases confidence that like is being compared with like. However, the remaining differences still require explanation. For example, the fact that the United States report greater than ten times the proportion of students with disabilities than those reported by Turkey appears unlikely to be attributable to this degree of differential prevalence of disabilities in the two countries. Other factors including different definitions of various categories of disability and the extent to which resources can be, and are, made

available for these students will play a part. This, and related issues, are discussed in greater detail in the final chapter of the monograph.

The extent to which students receiving additional resources for disabilities are educated within segregated settings also varies widely between countries as shown in Figure 4.2. Almost 90% of students with disabilities are educated in regular mainstream classes in Spain. Over 95% of such students are in special schools in Belgium (Flemish Community), while in Chile all of them are in special schools. Over 80% of students with disabilities are in some form of segregated setting (special school or special class) in 7 of the 13 countries for which data are available (note that in Finland and the United Kingdom [England] it is not possible to compute this as students in special classes and regular classes are not counted separately).

Figure 4.2. **Percentage of students receiving additional resources over the period of compulsory education in cross-national category A by location, 2003**



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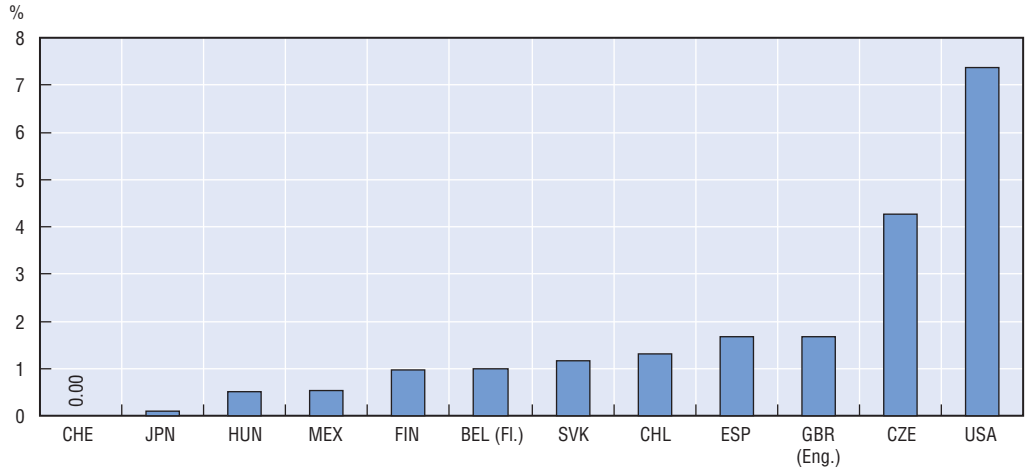
Notes:
Data for special classes in Spain are included in special schools.
Data for special classes in Finland and the United Kingdom (England) are included in regular classes.
Data for special classes in Germany are included in special schools.

Pre-primary education

Pre-primary education (*i.e.* that which is provided before the normal age at which children are required to attend school) is regarded by many as an important service for children with special educational needs. By providing early intervention for those who are likely to have difficulties in accessing the school curriculum, it may well be that such later problems are reduced.

Twelve countries were able to provide adequate data on the percentage of these children in this phase of education (Switzerland reported that there is no pre-school provision for children with disabilities). Figure 4.3 indicates the number of children receiving additional resources in pre-primary education who are considered to fall within cross-national category A for different countries, as a percentage of all children in pre-school education.

Figure 4.3. **Number of children receiving additional resources in pre-primary education in cross-national category A as a percentage of all children in pre-primary education, 2003**

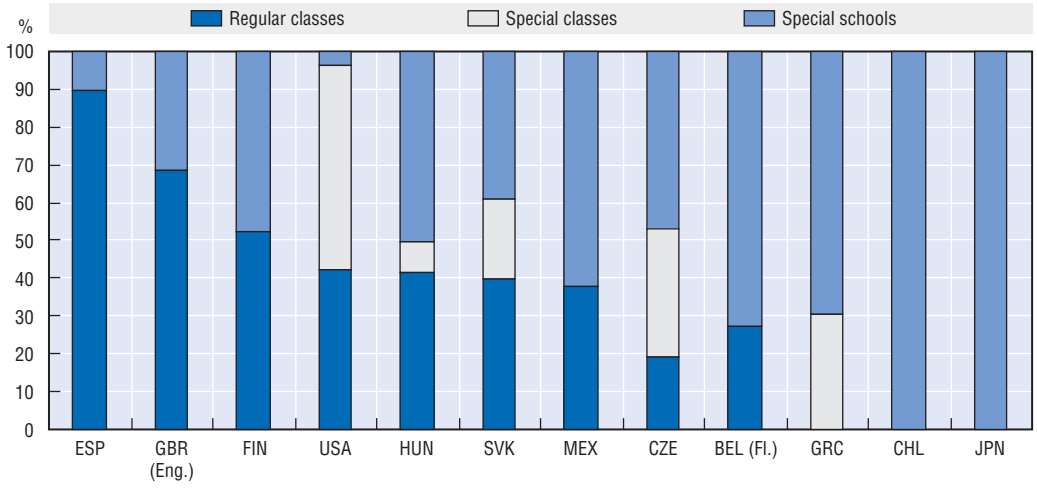


StatLink http://dx.doi.org/10.1787/106515185372

The median number of children receiving additional resources for disabilities, as a percentage of all children in pre-primary education is 1.08%, with an inter-quartile range of 0.53% to 1.67%.

Figure 4.4 shows that all such children are in segregated special centres in Chile and Japan. In nine of the ten countries for which a comparison can be made most pre-primary children with disabilities attend segregated special centres or special classes (note that in the United Kingdom (England) and Finland, it is not possible to compute this as students in special classes and regular classes are not counted separately). In Spain, however, nearly all such children are integrated into regular provision (90%).

Figure 4.4. **Percentages of children receiving additional resources over the period of pre-primary education in cross-national category A by location, 2003**



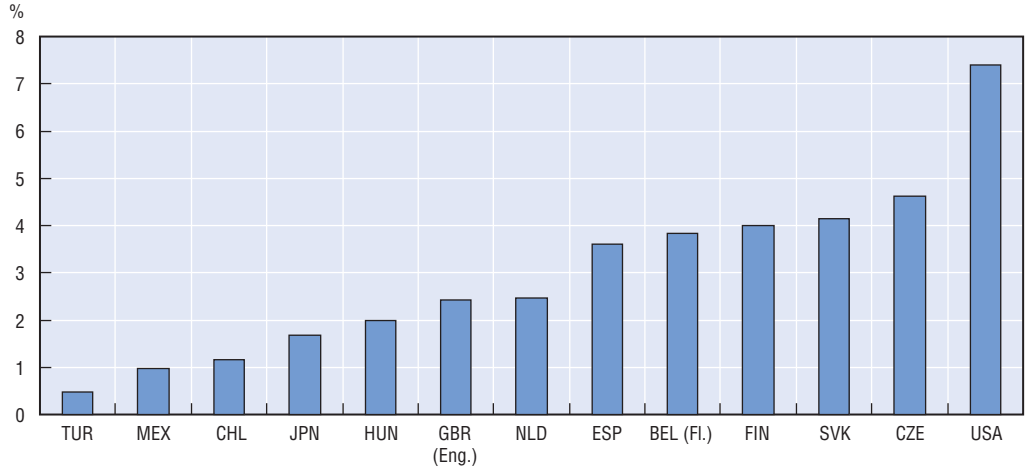
StatLink http://dx.doi.org/10.1787/106565155656

Notes:
Data for special classes in Spain are included in special schools.
Data for special classes in Finland and the United Kingdom (England) are included in regular classes.

Primary education

As indicated above there are typically higher percentages of students with disabilities receiving additional resources at primary level than at pre-primary. Figure 4.5 provides details. The overall median value for the 13 countries providing usable data is 2.46%, with an inter-quartile range of 1.17% to 4.01%; with the United States at 7.39%, substantially higher than the second highest value (4.62%)

Figure 4.5. **Number of students receiving additional resources in primary education in cross-national category A as a percentage of all children in primary education, 2003**

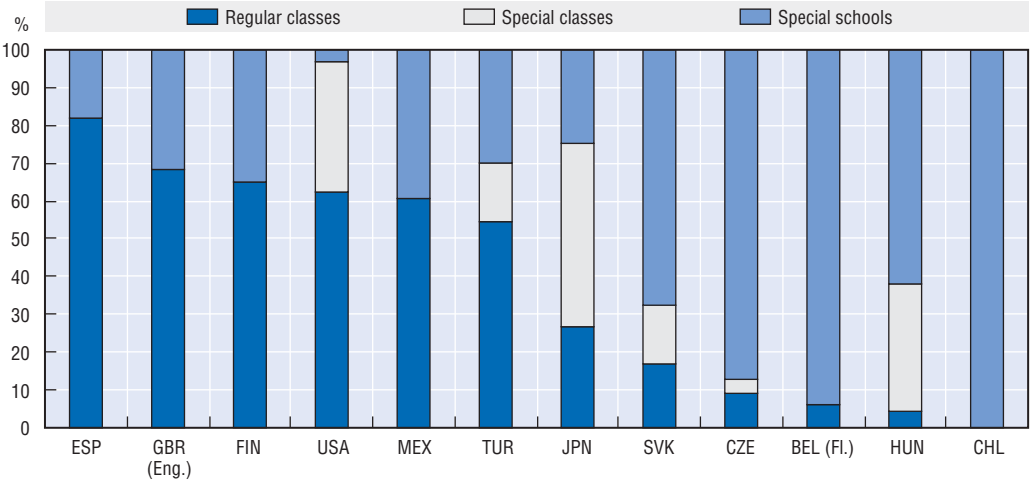


StatLink http://dx.doi.org/10.1787/106601312484

Notes: Data for the Netherlands include pre-primary education.

The location of the education of cross-national category A students at primary level is shown in Figure 4.6. The picture is again of the full range between large-scale integration in the regular classes of mainstream schools (Spain 82%) and total segregation in special

Figure 4.6. **Percentages of students receiving additional resources over the period of primary education in cross-national category A by location, 2003**



StatLink http://dx.doi.org/10.1787/106641850218

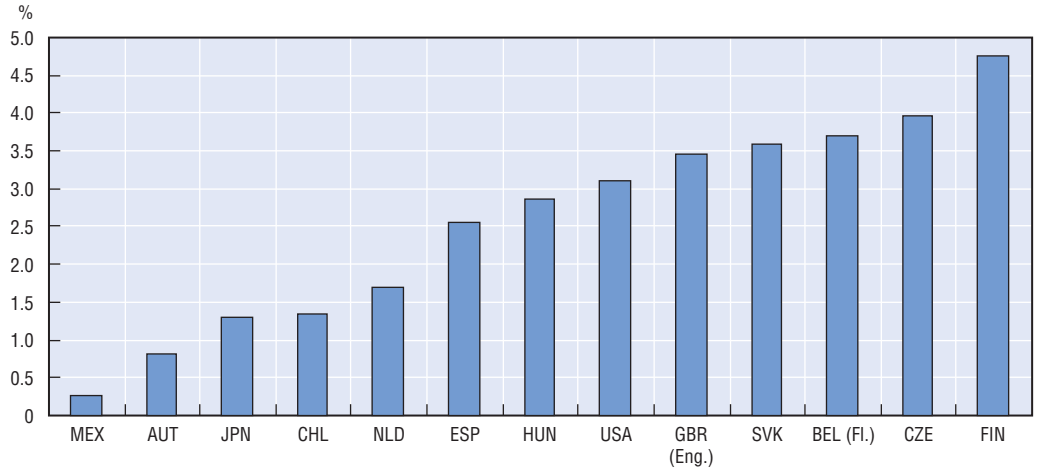
Notes:
Data for special classes in Spain included in special schools.
Data for special classes in Finland and the United Kingdom (England) are included in regular classes.

schools in Chile. This divergence is further illustrated by the fact that six of the countries represented have a majority of these students receiving additional resources for disabilities in segregated special schools or classes, while four have a majority of these students in fully integrated regular classes (Finland and the United Kingdom [England] present aggregate figures where students in special classes are included in regular classes, hence the percentage in regular classes cannot be determined). Hungary, Japan and the United States are the only countries to make substantial use of special classes.

Lower secondary education

Figure 4.7 shows the number of students with disabilities receiving additional resources in lower secondary education (again as a percentage of all students at that level). The overall median value for the thirteen countries providing full data is 2. 87% with an inter-quartile range of 1.9% to 3.8%.

Figure 4.7. **Number of students receiving additional resources in lower secondary education in cross-national category A as a percentage of all students in lower secondary education, 2003**



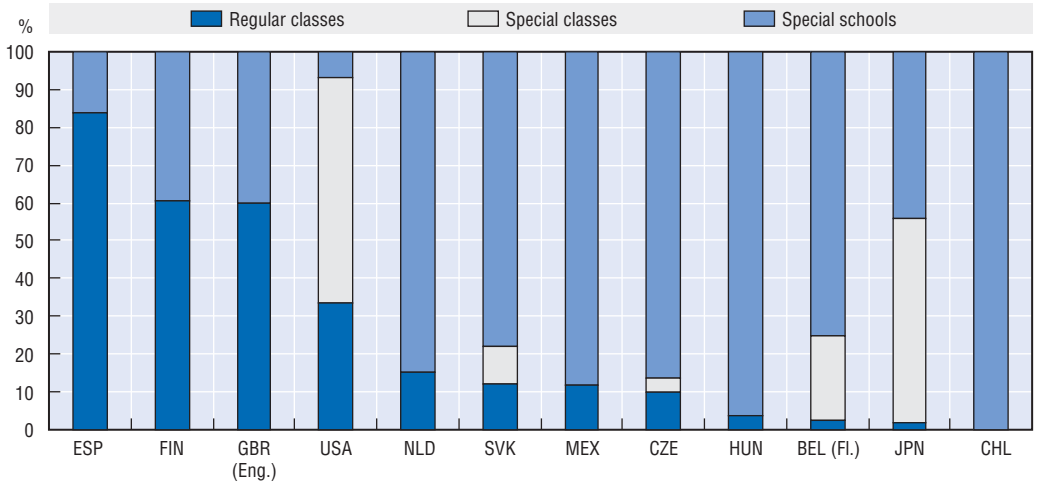
StatLink http://dx.doi.org/10.1787/106645827672

Data on the location of the education of students with disabilities receiving additional resources shows a very similar pattern at lower secondary to that at primary level and is displayed in Figure 4.8.

The picture is once more of the full range between large-scale integration in the regular classes of mainstream schools (Spain with 84%) and over 85% segregation in special schools in Belgium (Flemish Community), Chile, the Czech Republic, Hungary, the Netherlands and Mexico. Nine of the ten countries where appropriate statistics are available have two thirds or more of these students receiving additional resources for disabilities in segregated settings (either special schools or special classes). Finland and the United Kingdom (England) again present aggregate figures where students in special classes are included in regular classes.

Generally countries with largely integrated or largely segregated provision maintain the same pattern of provision at lower secondary as at primary level, with Mexico being an exception: while there was a majority (61%) of students with disabilities in regular classes

Figure 4.8. **Percentages of students receiving additional resources over the period of lower secondary education in cross-national category A by location, 2003**



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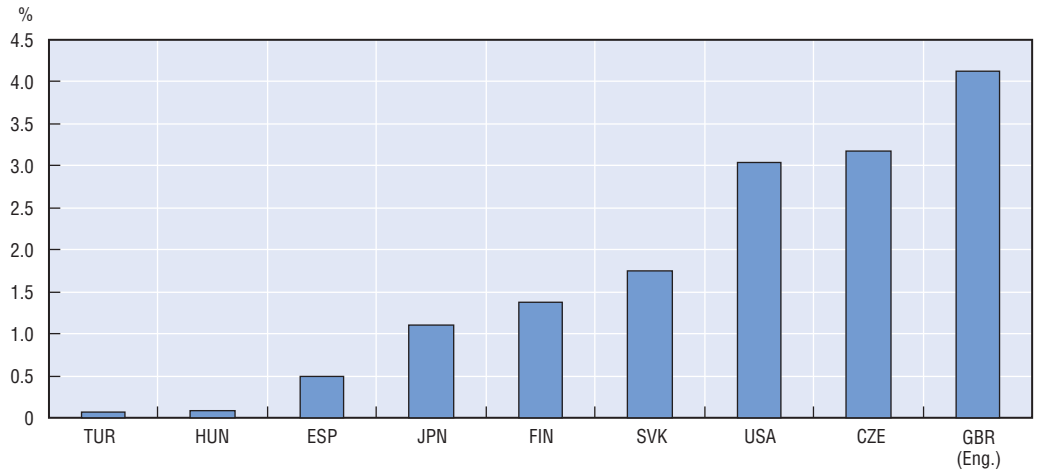
Notes:
Data for special classes in Spain are included in special schools.
Data for special classes in Finland and the United Kingdom (England) are included in regular classes.
Data for the Netherlands include upper secondary education.

at primary level, this reduces to 12% at lower secondary level, with 88% being educated in segregated special schools at lower secondary level.

Upper secondary education

Figure 4.9 shows the number of students with disabilities receiving additional resources in upper secondary education (again as a percentage of all students at that level). The overall median value for the nine countries providing usable data is 1.37% with an inter-quartile range of 0.49% to 3.04%.

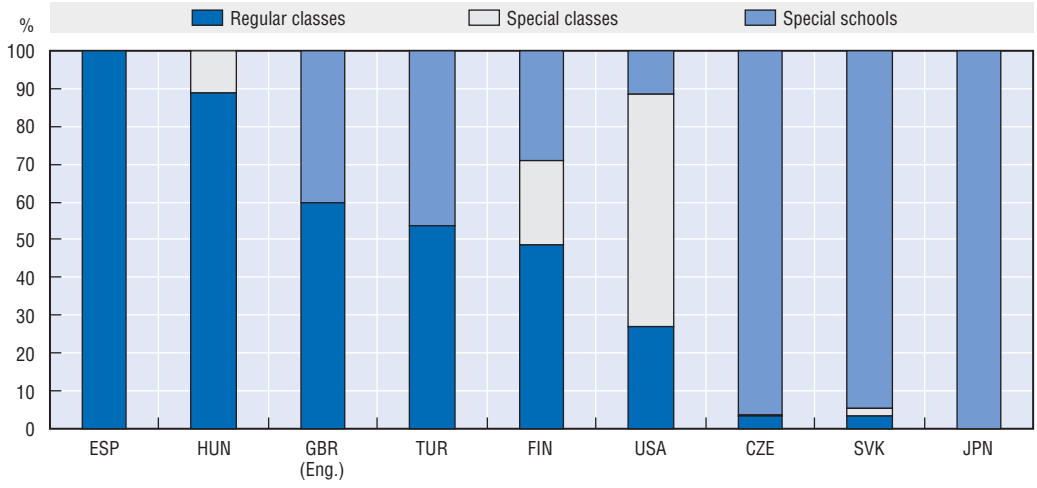
Figure 4.9. **Number of students receiving additional resources in upper secondary education in cross-national category A as a percentage of all students in upper secondary education, 2003**



StatLink http://dx.doi.org/10.1787/106701016163

Data on the location of the education of students with disabilities receiving additional resources shows a very similar pattern at upper secondary to that at primary and lower secondary level and is displayed in Figure 4.10. The picture is again of the full range between large-scale integration in the regular classes of mainstream schools (Spain 100%; Hungary 89%) and total or virtually total segregation in special schools in Japan (100%), the Czech Republic (96%) and the Slovak Republic (95%). There is again a similarly contrasting pattern in that three of the nine countries have over 80% of these students receiving additional resources for disabilities in segregated special schools, while four have a majority of these students in fully integrated regular classes. Finally Finland has half of the students in regular classes, and half in the other two locations (the United Kingdom [England] again presents aggregate figures where students in special classes are included in regular classes, hence the percentage in regular classes cannot be determined).

Figure 4.10. **Percentages of students receiving additional resources over the period of upper secondary education in cross-national category A by location, 2003**



Notes:
Data for special classes in the United Kingdom (England) are included in regular classes.

In most cases countries with largely integrated or largely segregated provision at lower secondary level present the same pattern of provision is maintained at upper secondary, although there are exceptions. For example, in Japan, while there is extensive use of special classes at lower secondary level (54%), these students are exclusively (100%) in special schools at upper secondary, with negligible use of special classes.

Comparisons between numbers at different levels of education – cross-national category A

Pre-primary/Primary

It is noteworthy that, as shown in Table 4.1, for 10 of the 11 countries for which comparisons can be made, the percentages for pre-primary are smaller than the corresponding percentages at primary level (see also Figure 5.5). Median values are 1.17% at pre-primary and 3.61% at primary level; this difference reaches statistical significance (Wilcoxon test $n = 11$, $T = 1$, $p < 0.05$). One possible explanation for this finding is that it is difficult or impossible for some of these children to be identified as having a disability before they start compulsory education.

Table 4.1. **Comparison of numbers of children with disabilities receiving additional resources in pre-primary and primary education as a percentage of all children in that phase of education, 2003**

	Pre-primary	Primary
Japan	0.10	1.69
Hungary	0.50	2.00
Mexico	0.53	0.98
Finland	0.97	4.01
Belgium (Fl.)	0.99	3.84
Slovak Republic	1.17	4.14
Chile	1.31	1.17
Spain	1.67	3.61
United Kingdom (Eng.)	1.67	2.43
Czech Republic	4.27	4.62
United States	7.38	7.39

It is also apparent from Table 4.1 that countries show consistency of provision across the two phases *i.e.* those with higher percentages at pre-primary tend to have a high percentage at primary, and conversely. The positive correlation is statistically significant (Spearman's rho = + 0.61, N = 11, $p < 0.05$).

Primary/Lower secondary

There is no consistent pattern for the relative size of percentages in these two phases of education, as shown in Table 4.2. The median value for the 11 countries for which there are data at both phases is 3.61% for primary and 3.11% for lower secondary with seven countries showing a decreased percentage at lower secondary compared with primary while four countries show an increased percentage.

Table 4.2. **Comparison of numbers of children with disabilities receiving additional resources in primary and lower secondary education as a percentage of all children in that phase of education, 2003**

	Primary	Lower Secondary
Hungary	2.00	2.87
Mexico	0.98	0.26
Chile	1.17	1.34
Japan	1.69	1.30
United Kingdom (Eng.)	2.43	3.45
Spain	3.61	2.55
Belgium (Fl.)	3.84	3.70
Finland	4.01	4.76
Slovak Republic	4.14	3.60
Czech Republic	4.62	3.96
United States	7.39	3.11

Countries again show consistency of provision across the two phases; *i.e.* those with higher percentages at primary tend to have a high percentage at lower secondary, and conversely. The positive correlation is statistically significant (Spearman's rho = + 0.77, N = 11, $p < 0.05$).

Lower secondary/Upper secondary

There is a strong tendency for the relative size of percentages in upper secondary to be smaller than those at lower secondary, as shown in Table 4.3. The median value at upper secondary level for the eight countries for which there are data at lower secondary is lower (1.56% as against 3.28%), this difference reaches statistical significance (Wilcoxon test n = 8, T = 3 p < 0.05). Seven of the countries show a decreased percentage at upper secondary compared with lower. Only one, the United Kingdom (England), shows an increased percentage, perhaps reflecting a concern for extending the age range of educational provision for students with disabilities.

Table 4.3. **Comparison of numbers of children with disabilities receiving additional resources in lower and upper secondary education as a percentage of all children in that phase of education, 2003**

	Lower secondary	Upper secondary
Hungary	2.87	0.09
Japan	1.30	1.11
Spain	2.55	0.49
United States	3.11	3.04
United Kingdom (Eng.)	3.45	4.12
Slovak Republic	3.60	1.75
Czech Republic	3.96	3.18
Finland	4.76	1.37

There is again consistency of provision across the two phases (*i.e.* those with higher percentages at lower secondary tend to have a high percentage at upper secondary, and conversely), although the correlation does not quite reach statistical significance (Spearman's rho = + 0.62, N = 8, p > 0.05).

Quantitative data on cross-national category B (students receiving additional resources for difficulties)

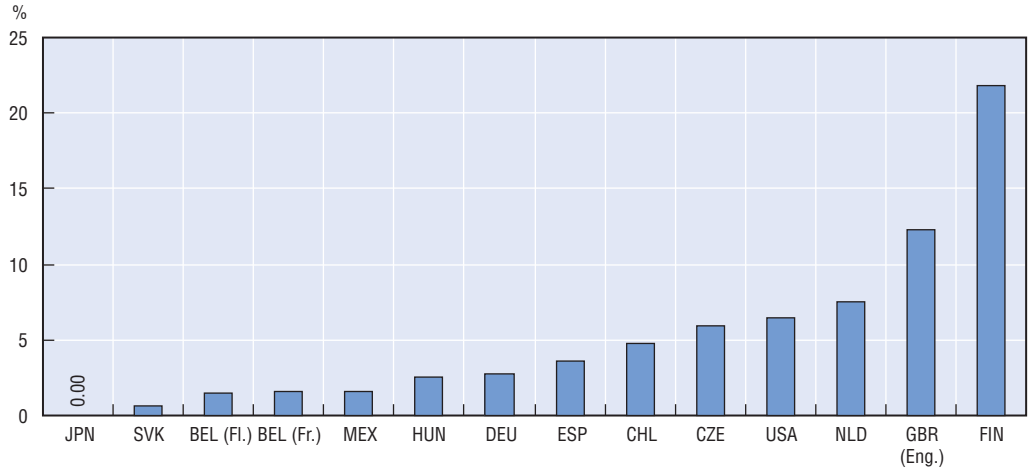
As previously discussed the quantity and quality of data relating to cross-national categories B and C are inferior to that for cross-national category A. Cross-national category B, as discussed and defined in Chapter 1, refers to students showing behavioural or learning difficulties in the educational setting which do not appear to be primarily attributable to organic disabilities or socio-economic background.

While all countries using categorical systems for special educational needs have national categories which they consider to fall within cross-national category A, one country submitting data in 2003 (Japan) has no national categories in cross-national category B.

The period of compulsory education

Figure 4.11 shows the number of students receiving additional resources within the period of compulsory education who are considered to fall within cross-national category B for different countries, as a percentage of all students in compulsory education. A country with no national categories falling within cross-national category B (*i.e.* for whom a zero is entered because the category is not applicable) is included in the chart as this implies that

Figure 4.11. **Number of students receiving additional resources over the period of compulsory education in cross-national category B as a percentage of all students in compulsory education, 2003**



StatLink http://dx.doi.org/10.1787/106711511510

Notes: No national categories falling within cross-national category B for Japan.

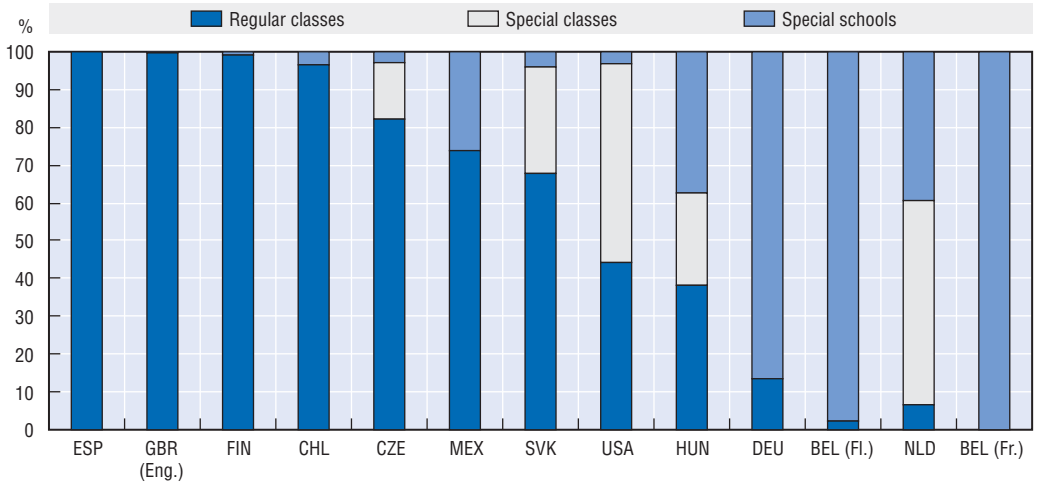
there are no cross-national category B students receiving additional resources. Including this, 14 countries provide full data. The median number of category B students as a percentage of all students in compulsory education is 3. 51%. The inter-quartile range from 1.58% to 6.33% indicates an amount of variability substantially greater than that found in the corresponding data for students with disabilities (1.26% to 3.62%).

Several countries have percentages of students with learning or behaviour difficulties greatly in excess of those with disabilities. These figures in Finland are 21.86% and 4.39% respectively; in the United Kingdom (England) 12.33% and 2.99%; and in the Netherlands 7.49% and 2.52%. It appears that when such categories are recognised in national systems the numbers of students receiving additional resources can be considerable.

Figure 4.12 presents data from 13 countries on the location of students receiving additional resources for learning and other difficulties in compulsory education. While again showing major country-to-country variation, the typical pattern is for at least two thirds of such students to be educated in regular classes in mainstream schools. This is true for five of the ten countries where the data enable this to be decided (in the United Kingdom [England] and Finland, while fewer than 1% are educated in special schools, it is not known how the remaining students are divided between special classes and regular classes).

Important exceptions are Belgium (Flemish Community) and Belgium (French Community) where virtually all such students are educated in special schools, and the Netherlands where only 7% of students receiving additional resources because of learning and other difficulties are educated in regular classes, the rest being split between special classes (54%) and special schools (39%). Apart from the Netherlands, the only other country to place most of these students in special classes is the United States (52%).

Figure 4.12. **Percentages of students receiving additional resources over the period of compulsory education in cross-national category B by location, 2003**



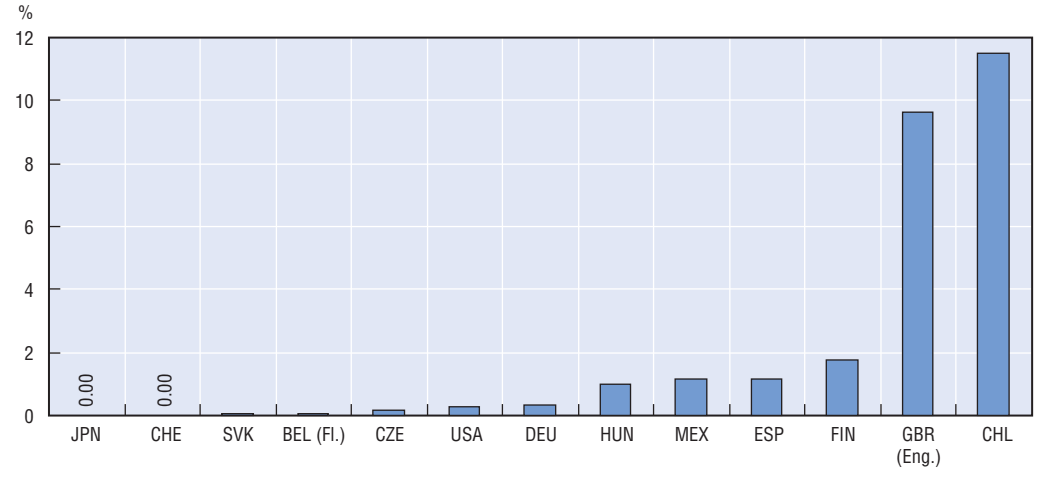
StatLink http://dx.doi.org/10.1787/106786051356

Notes:
Data for special classes in Finland and the United Kingdom (England) are included in regular classes.
Data for special classes in Germany are included in special schools.

Pre-primary education

Figure 4.13 indicates the number of children receiving additional resources in pre-school education who are considered to fall within cross-national category B for the 13 countries with usable data, as a percentage of all children in pre-school education. The median value for the number of children receiving additional resources because of difficulties is 0.30%, with an inter-quartile range of 0.07% to 1.18%.

Figure 4.13. **Number of children receiving additional resources in pre-primary education in cross-national category B as a percentage of all children in pre-primary education, 2003**

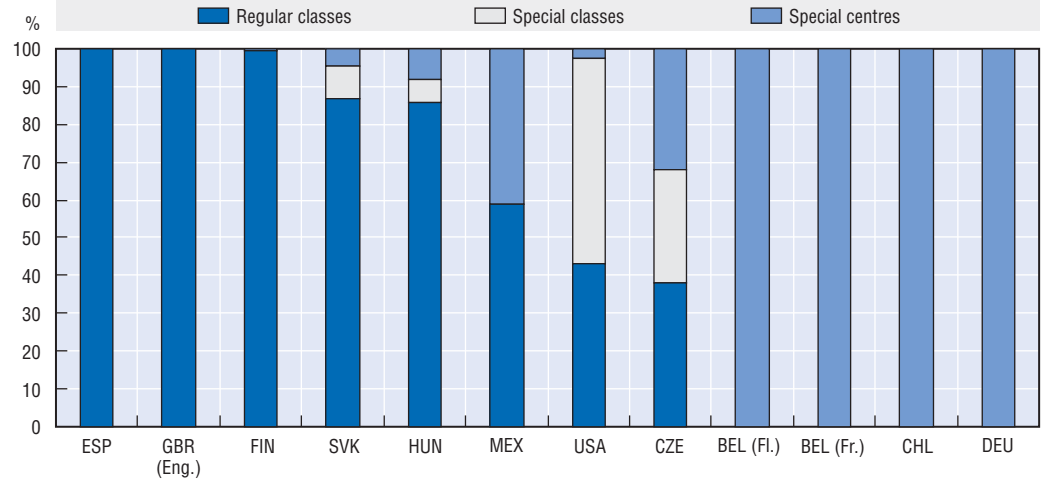


StatLink http://dx.doi.org/10.1787/106803027030

However, while it appears that typically countries provide little or no additional resources at pre-school level for these children, the United Kingdom (England) (9.61%) and Chile (11.50%) are notable exceptions.

Figure 4.14 shows that 12 countries can provide analysable data on the location of pre-school education for children with difficulties. In Belgium (Flemish Community), Belgium (French Community), Chile and Germany all such children are placed in special centres. The United States and the Czech Republic are the only countries to make substantial use of special classes (54% and 30% respectively). Otherwise a common pattern (found in five countries) is for almost all children to be placed in regular integrated classes with other children (note again that the split between regular and special classes is not made in Finland and United Kingdom [England] data returns).

Figure 4.14. **Percentages of children receiving additional resources over the period of pre-primary education in cross-national category B by location, 2003**



StatLink http://dx.doi.org/10.1787/106823500087

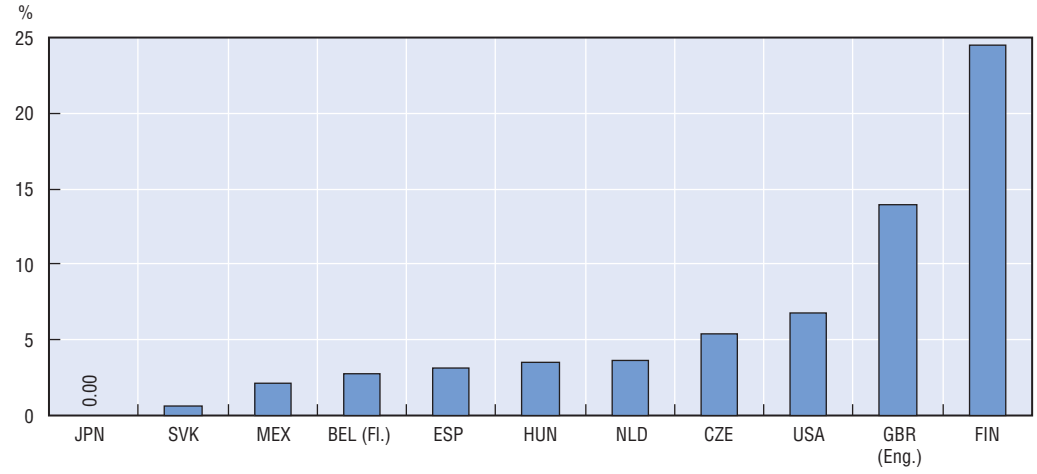
Notes:
Data for special classes in Finland and the United Kingdom (England) are included in regular classes.
Data for special classes in Germany are included in special schools.

Primary education

Figure 4.15 provides details of the number of students with difficulties receiving additional resources at primary level as a percentage of all students in primary education. The overall median value for the eleven countries providing data is 3.48%, with an inter-quartile range of 2.44% to 6.06%. Finland has the highest value of 24.51%.

Ten countries provided full data on the location of the education of cross-national category B students at primary level, as shown in Figure 4.16. In four countries, 80% or more of these students are educated in regular classrooms. An exception is Belgium (Flemish Community) and Belgium (French Community) where they are virtually all in special schools. Other countries show idiosyncratic patterns. The United States has over 50% in special classes; Hungary an almost equal split between regular classes, special classes and special schools. As at other phases of education in the United Kingdom (England), while fewer than 1% are educated in special schools, it is not known how the rest are divided between special classes and regular classes.

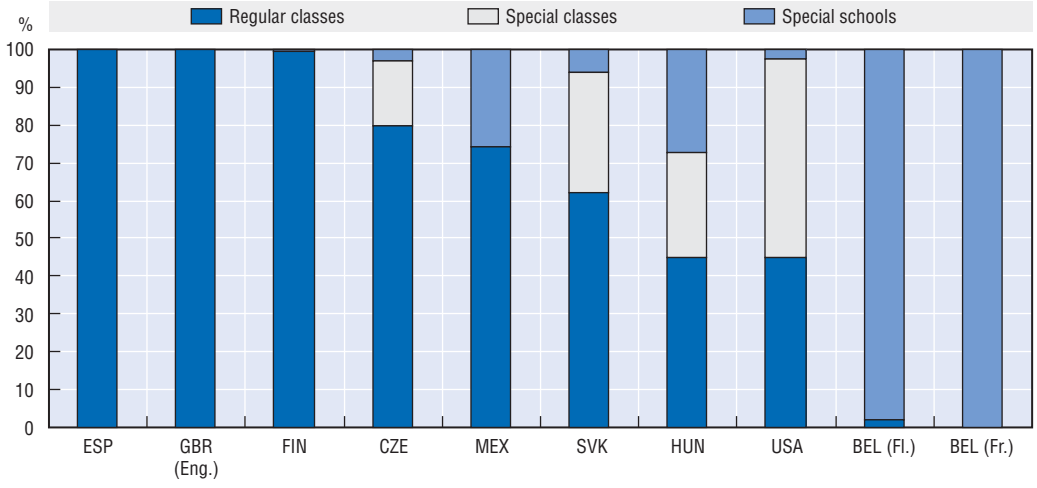
Figure 4.15. **Number of students receiving additional resources in primary education in cross-national category B as a percentage of all children in primary education, 2003**



StatLink http://dx.doi.org/10.1787/106833153516

Note: Data for the Netherlands include pre-primary education.

Figure 4.16. **Percentages of students receiving additional resources over the period of primary education in cross-national category B by location, 2003**



StatLink http://dx.doi.org/10.1787/106871487114

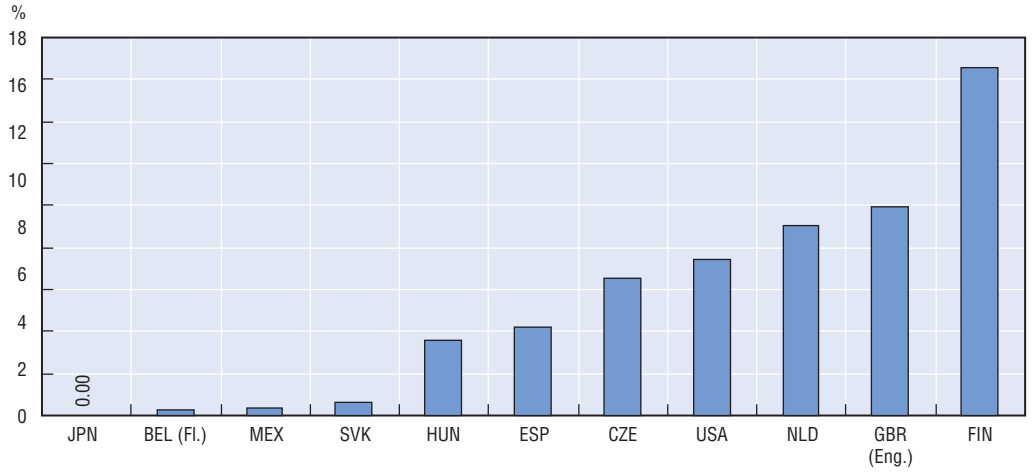
Notes:
Data for special classes in Finland and the United Kingdom (England) are included in regular classes.
Data for the Netherlands include pre-primary education.

Lower secondary education

Figure 4.17 shows the number of students with difficulties receiving additional resources in lower secondary education (again as a percentage of all students at that level). The overall median value for the ten countries providing full data is 4.24% with the large inter-quartile range of 0. 51% to 8.26%. Finland again has the highest value of 16.58%.

Data on the location of the education of students with difficulties receiving additional resources is shown in Figure 4.18. Most countries show a very similar pattern at lower

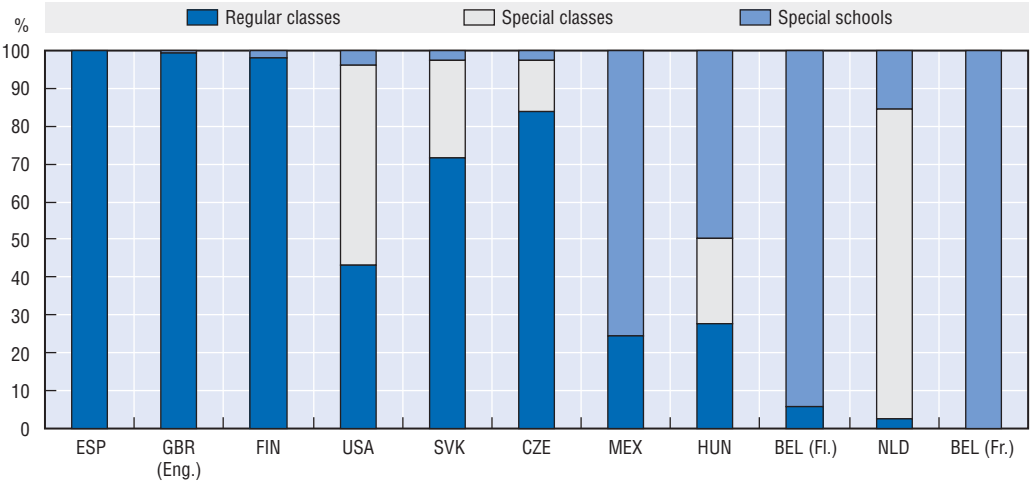
Figure 4.17. **Number of students receiving additional resources in lower secondary education in cross-national category B as a percentage of all students in lower secondary education, 2003**



StatLink http://dx.doi.org/10.1787/106877722047

Note: Data for the Netherlands include upper secondary education

Figure 4.18. **Percentages of students receiving additional resources over the period of lower secondary education in cross-national category B by location, 2003**



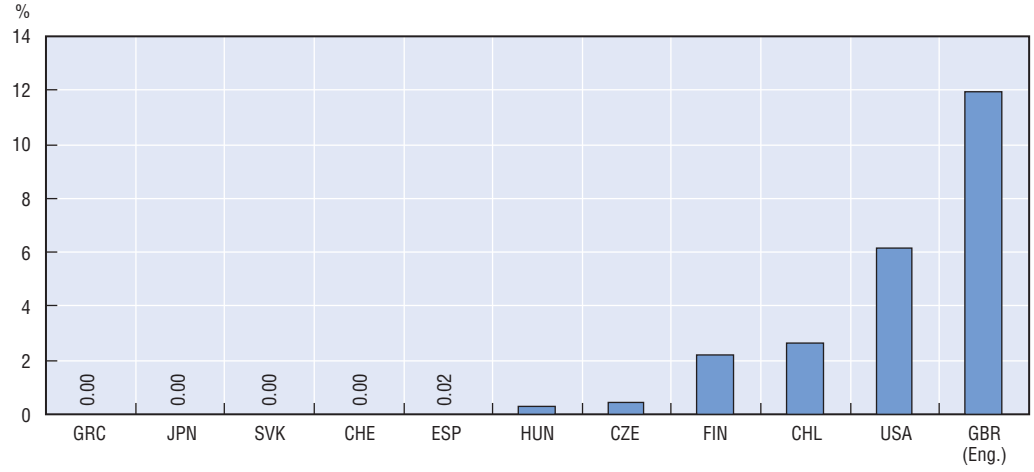
Notes:
Data for special classes in Finland and the United Kingdom (England) included in regular classes.
Data for the Netherlands include upper secondary education.

secondary to that at primary level. However Mexico shows major changes. Whereas at primary level almost three-quarters of students with learning and other difficulties are educated in regular schools, this proportion has dropped to just below one quarter at lower secondary level, with over three quarters now in special schools. Hungary shows a similar, though less dramatic, change; the proportion in regular schools dropping from one third to 28%, with those in special schools increasing from just over one third to nearly half.

Upper secondary education

Figure 4.19 shows the number of students with difficulties receiving additional resources in upper secondary education (again as a percentage of all students at that level). In 7 of the 11 countries for which full data are available, the percentage receiving additional resources at this level of education is very small (0.50% or fewer). The median value is 0.37% with an inter-quartile range of 0.00% to 2.62%.

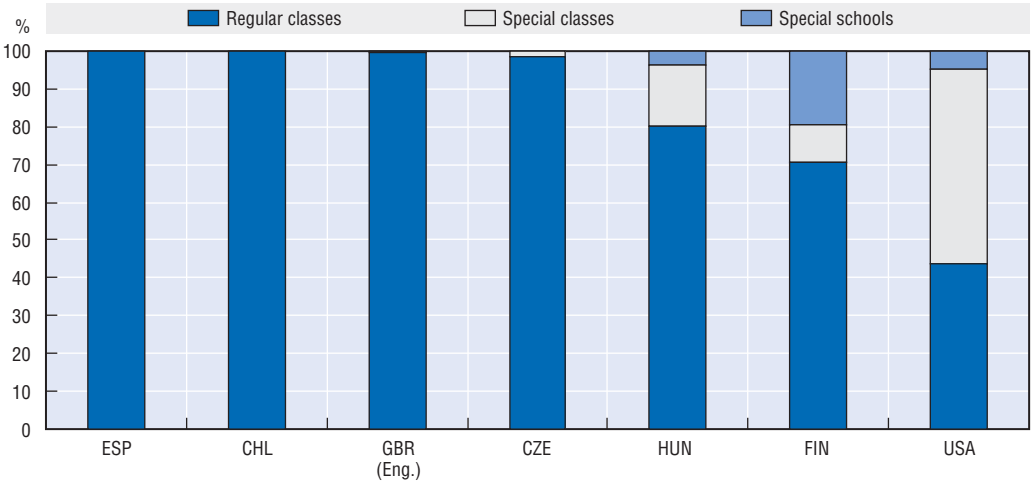
Figure 4.19. **Number of students receiving additional resources in upper secondary education in cross-national category B as a percentage of all students in upper secondary education, 2003**



StatLink http://dx.doi.org/10.1787/106882262731

Adequate data on the location of the education of these students at upper secondary level are available for seven countries as shown in Figure 4.20. The patterns are similar to those at lower secondary level. Finland, Hungary and the United States are the only

Figure 4.20. **Percentages of students receiving additional resources over the period of upper secondary education in cross-national category B by location, 2003**



StatLink http://dx.doi.org/10.1787/107013162723

Note: Data for special classes in Finland and the United Kingdom (England) are included in regular classes.

countries for which data are available which make substantial use of segregated provision at this level. As at other levels of education, the United Kingdom (England) data do not permit separate assessment of the numbers of students in special or regular classes.

Comparisons between numbers at different levels of education – cross-national category B

Pre-primary/Primary

As was found above in analysing the data on children with disabilities, the percentages at pre-primary level are smaller than the corresponding percentages at primary level (see also Figure 4.15). Table 4.4 gives details for the nine countries where comparisons can be made. For all nine countries, percentages are greater at primary level than at pre-primary level, hence the differences are clearly significant statistically (Wilcoxon test, $n = 9$, $T = 0$, $p < 0.05$). Median values for this restricted set are 0.98% at pre-primary and 3.48% at primary level. As in the case of children with disabilities (CNC A), it is possible that this difference reflects the difficulty in identifying some of these children at pre-primary school.

Table 4.4. **Comparison of numbers of children with difficulties receiving additional resources in pre-primary and primary education as a percentage of all children in that phase of education, 2003**

	Pre-primary	Primary
Slovak Republic	0.05	0.65
Belgium (Fl.)	0.07	2.73
Czech Republic	0.17	5.36
United States	0.27	6.76
Hungary	0.98	3.48
Mexico	1.16	2.14
Spain	1.18	3.11
Finland	1.77	24.51
United Kingdom (Eng.)	9.61	13.89

As found in the case of students with disabilities, countries show consistency of provision across the two phases; *i.e.* those with higher percentages at pre-primary tend to have a high percentage at primary, and conversely. The positive correlation here just reaches significance (Spearman's rho = + 0.62, $N = 9$, $p < 0.05$).

Primary/Lower secondary

A comparison of percentages at primary and lower secondary levels is illustrated in Table 4.5. Of the nine countries for which comparisons are possible, five have greater percentages at lower secondary level, and four have greater percentages at primary level; hence any differences are non-significant. Median values are 3.48% at primary and 3.55% at lower secondary.

As in previous comparisons of percentages at different phases or stages of education, there is a high degree of consistency, those countries with high percentage provision at one phase tending to have relatively high provision at the next phase, and vice-versa (Spearman's rho = + 0.91, $N = 9$, $p < 0.05$).

Table 4.5. **Comparison of numbers of students with difficulties receiving additional resources in primary and lower secondary education as a percentage of all students in that phase of education, 2003**

	Primary	Lower secondary
Slovak Republic	0.65	0.66
Mexico	2.14	0.36
Belgium (Fl.)	2.73	0.31
Spain	3.11	4.24
Hungary	3.48	3.55
Czech Republic	5.36	6.51
United States	6.76	7.47
United Kingdom (Eng.)	13.89	9.96
Finland	24.51	16.58

Lower secondary/Upper secondary

The percentage receiving additional resources at upper secondary level is lower than that for lower secondary for six of the seven countries for which comparative data are available, as shown in Table 4.6.

Table 4.6. **Comparison of numbers of children with difficulties receiving additional resources in lower and upper secondary education as a percentage of all children in that phase of education, 2003**

	Lower Secondary	Upper Secondary
Slovak Republic	0.66	0
Hungary	3.55	0.29
Spain	4.24	0.02
Czech Republic	6.51	0.46
United States	7.47	6.12
United Kingdom (Eng.)	9.96	11.95
Finland	16.58	2.21

The exception is the United Kingdom (England) which shows an increase from 9.96% to 11.95%. Apart from the United States where the drop is quite small, the other countries where comparisons are possible show very substantial decreases from lower to upper secondary. The median percentage drops from 6.51% at lower secondary to 0.46% at upper secondary, and this difference is statistically significant [Wilcoxon test, $N = 7$ $T = 2$ $p > 0.05$]).

Countries again show consistency of provision across the two phases; *i.e.* those with higher percentages at lower secondary level tend to have a high percentage at upper secondary, and conversely. The positive correlation here just reaches significance (Spearman's rho= + 0.85, $N = 7$, $p < 0.05$).

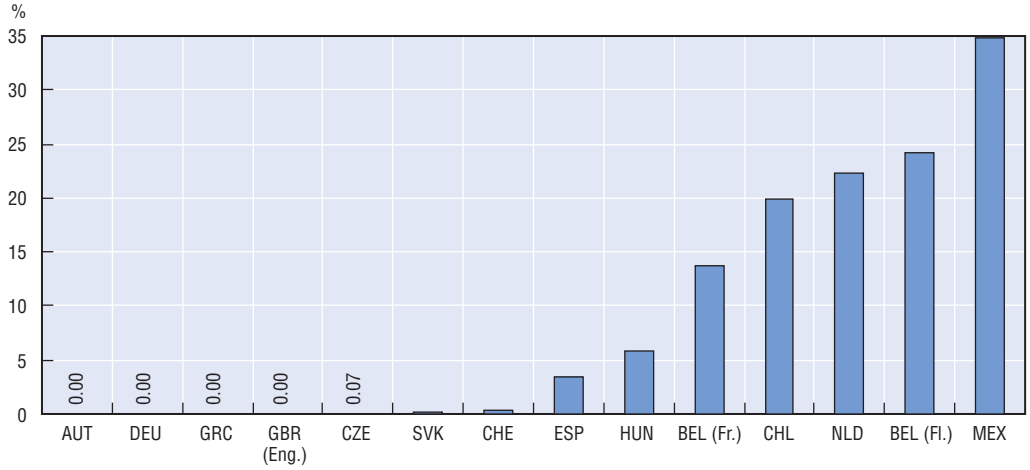
Quantitative data on cross-national category C (students receiving additional resources for disadvantages)

Cross-national category C, as discussed and defined in Chapter 1, covers those national categories referring to students considered to have special needs arising from disadvantages in their socio-economic background. Of the countries providing 2003 data, Austria and the United Kingdom (England) had no categories which they placed in cross-national Category C (Table 2.1 gives details).

The period of compulsory education

Figure 4.21 shows the number of students receiving additional resources within the period of compulsory education who are considered to fall within cross-national category C for different countries, as a percentage of all students in compulsory education (the period of compulsory education differs from country to country – see Annex C). The countries with no national categories falling within cross-national category C (*i.e.* for whom a zero is entered because the category is not applicable) are, as with cross-national category B charts, included in the chart as this implies that there are no cross-national category C students receiving additional resources. Including these, 14 countries provide data, the median number of category C students as a percentage of all students in compulsory education being 1.91%. The large inter-quartile range is from 0.02% to 18.31%.

Figure 4.21. **Number of students receiving additional resources over the period of compulsory education in cross-national category C as a percentage of all students in compulsory education, 2003**

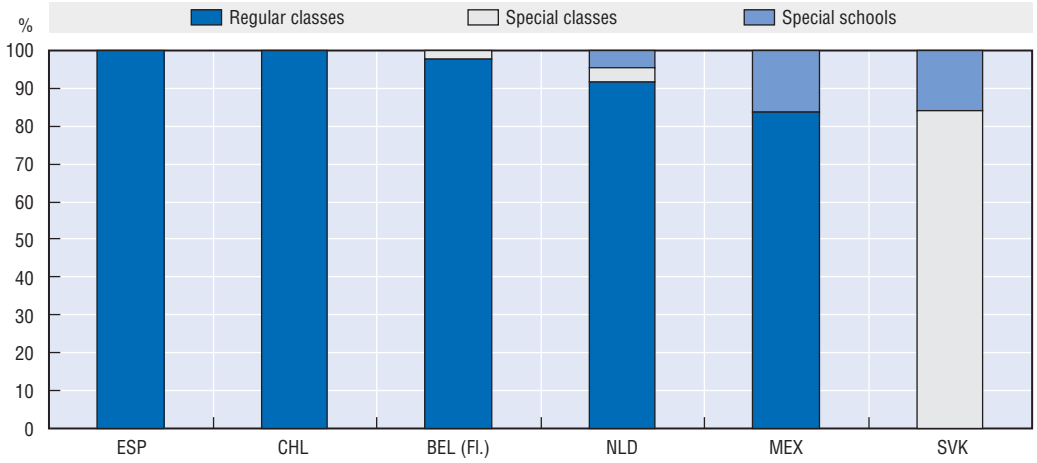


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Limiting the cross-national category C analysis to those countries with national categories falling within C, data are available from 12 countries (median percentage 4.64%; quartiles 0.14% and 20.45%). Taking these figures together with the high values of 19.85% (Chile), 22.26% (Netherlands), 24.19% (Belgium [Flemish Community]) and 34.83% (Mexico) which are substantially in excess of the highest percentages reported for students with disabilities, it appears that when such categories are recognised in national systems the numbers of students receiving additional resources is considerable.

Figure 4.22 presents data from six countries on the location of students receiving additional resources for disadvantages. In five of the six, this education is very largely (80% or more) in regular mainstream classrooms. The Slovak Republic is the outstanding exception, with 84% in special classes and the rest in special schools.

Figure 4.22. **Percentages of students receiving additional resources over the period of compulsory education in cross-national category C by location, 2003**

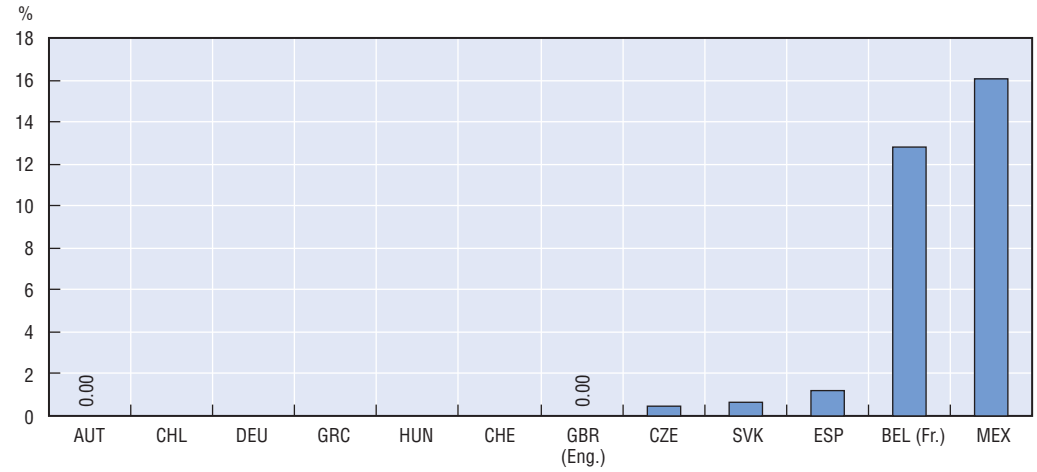


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Pre-primary education

Figure 4.23 indicates the number of children receiving additional resources in pre-primary education who are considered to fall within cross-national category C for different countries (including the United Kingdom [England]) where this figure is zero as there are no national categories in cross-national category C), as a percentage of all children in pre-school education. The median value for the number of children receiving additional resources because of difficulties is 0.00%, with an inter-quartile range of 0.00% to 0.80%.

Figure 4.23. **Number of children receiving additional resources over the period of pre-primary education in cross-national category C as a percentage of all children in pre-primary education, 2003**

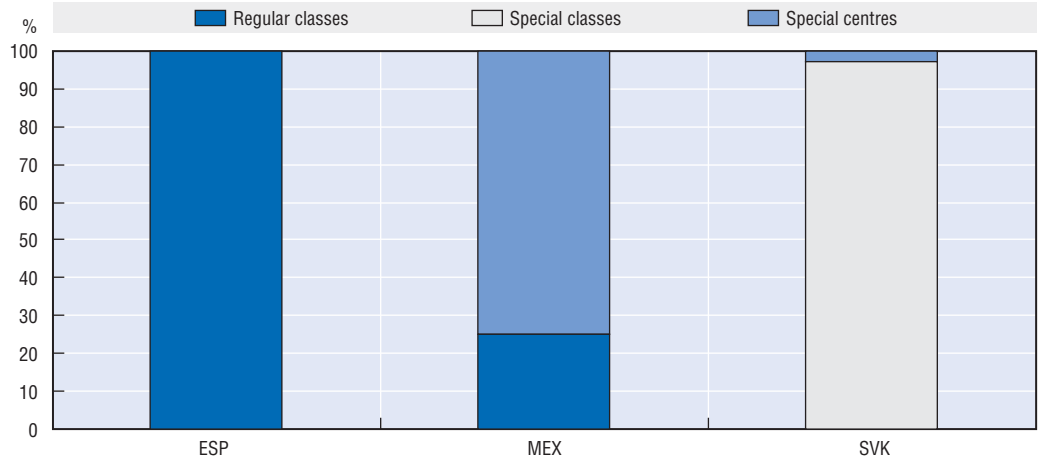


StatLink http://dx.doi.org/10.1787/107045842080

While it appears that typically countries provide little or no additional resources at pre-primary level for these children, Belgium (French Community) (12.85%), and Mexico (16.01%) are notable exceptions.

Three countries can provide data on the location of pre-primary education for children with difficulties, as shown in Figure 4.24. Spain has all disadvantaged children in regular integrated classes with other children, but in contrast the Slovak Republic places almost all (97%) in special classes and Mexico has 75% of them in special schools.

Figure 4.24. **Percentages of children receiving additional resources over the period of pre-primary education in cross-national category C by location, 2003**



StatLink http://dx.doi.org/10.1787/10.1787/107048130274

Primary education

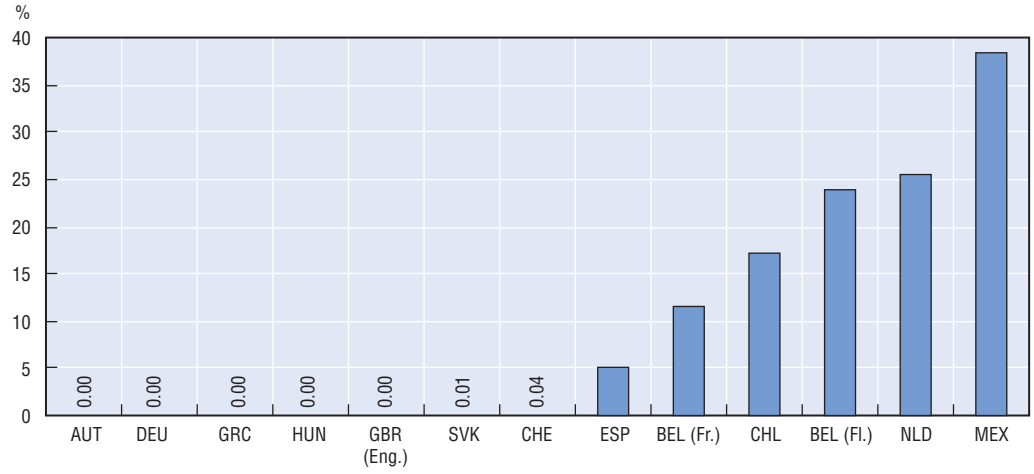
Figure 4.25 provides details of the number of students with disadvantages receiving additional resources at primary level as a percentage of all students in primary education. The overall median value for the 13 countries providing data (including 6 for which zeroes are entered) is 0.04%, with an inter-quartile range of 0.00% to 17.17%.

The location for the education of these students at primary level shows a similar pattern to that found in pre-primary education, as illustrated in Figure 4.26. Five countries provide data – three of them placing virtually all such students in regular integrated classes. The exception is again the Slovak Republic where the provision for socially disadvantaged students is in special schools. There is also some limited use of segregated provision in Mexico (20% in special schools), in contrast to the situation for pre-primary children, where the majority were placed in special schools.

Lower secondary education

Figure 4.27 shows the number of students with disadvantages receiving additional resources in lower secondary education (again as a percentage of all students at that level). The overall median value for the 13 countries providing usable data (including the 6 with a known percentage of zero) is 0.04% with an inter-quartile range of 0.00% to 8.73%.

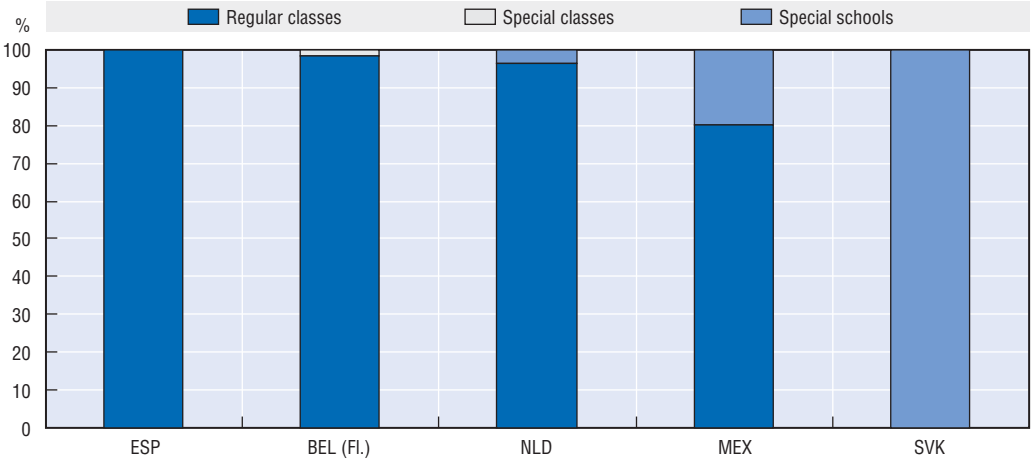
Figure 4.25. **Number of students receiving additional resources in primary education in cross-national category C as a percentage of all students in primary education, 2003**



StatLink http://dx.doi.org/10.1787/107107443327

Notes: Data for Belgium (Flemish Community) and for the Netherlands include pre-primary education.

Figure 4.26. **Percentages of students receiving additional resources over the period of primary education in cross-national category C by location, 2003**

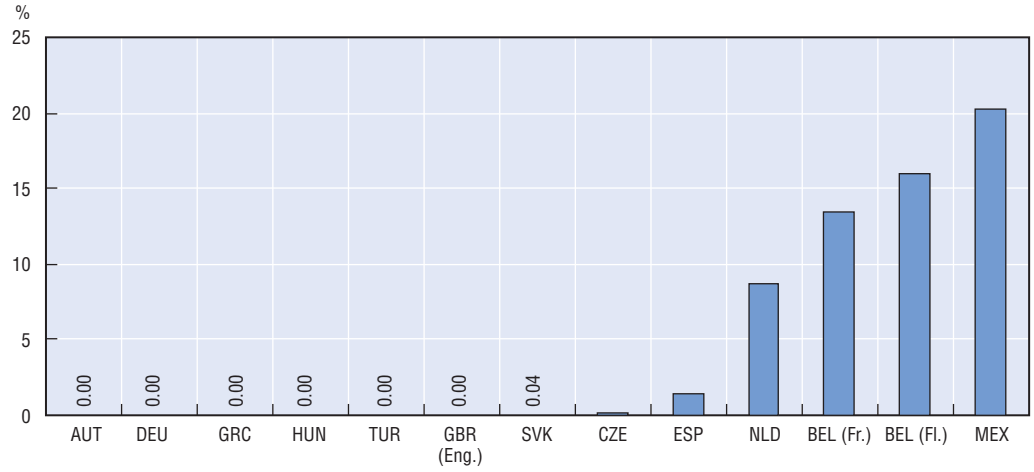


StatLink http://dx.doi.org/10.1787/107158014550

Notes: Data for Belgium (Flemish Community) and for the Netherlands include pre-primary education.

Data on the location of the education of students with disadvantages receiving additional resources are very similar to those at primary level, as shown in Figure 4.28. Of the six countries with usable data, four have at least 90% of these students in regular classes. The Netherlands has almost one fifth (18%) in special classes, and 8% in special schools, with the rest in regular classes. The exception, the Slovak Republic places all these students in special schools.

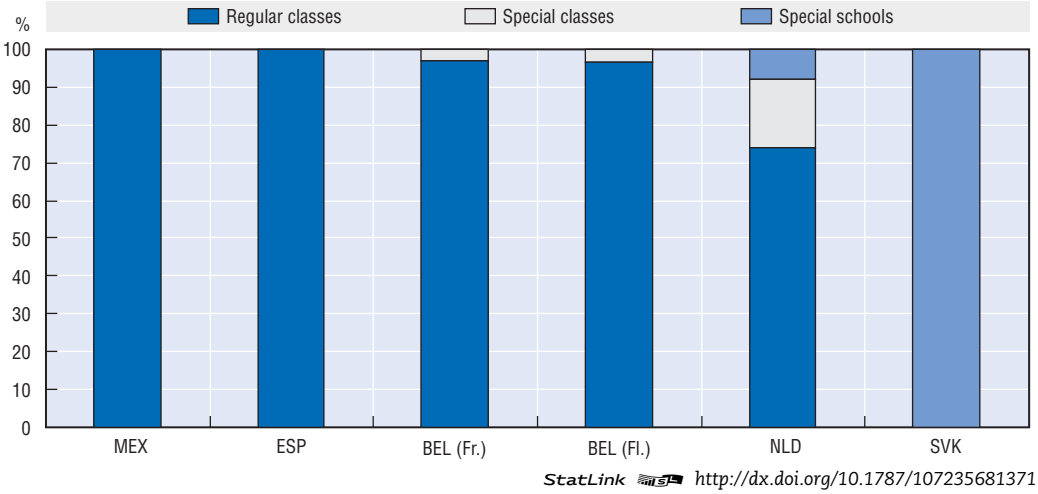
Figure 4.27. **Number of students receiving additional resources over the period of lower secondary education in cross-national category C as a percentage of all students in lower secondary education, 2003**



StatLink http://dx.doi.org/10.1787/107175742678

Notes: Data for Belgium (Flemish Community) and for the Netherlands include upper secondary education.

Figure 4.28. **Percentages of students receiving additional resources over the period of lower secondary education in cross-national category C by location, 2003**



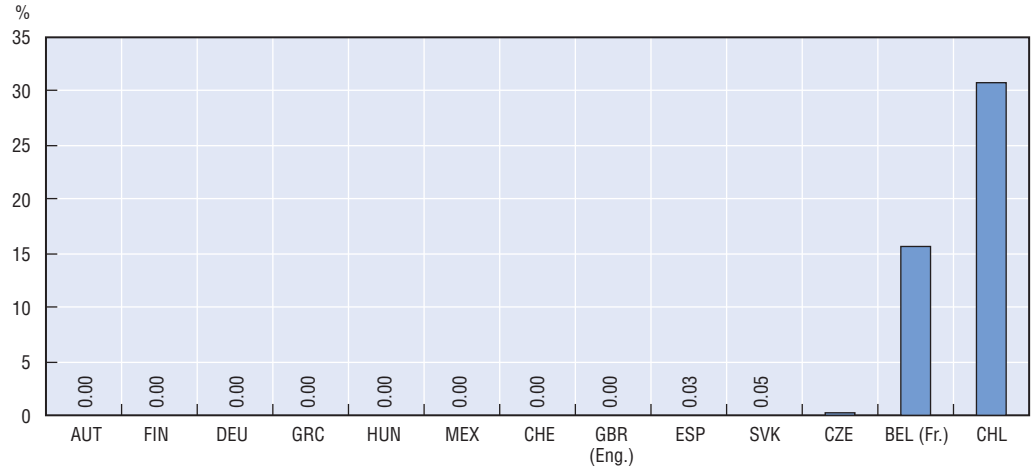
StatLink http://dx.doi.org/10.1787/107235681371

Notes: Data for Belgium (Flemish Community) and for the Netherlands include upper secondary education.

Upper secondary education

Figure 4.29 shows the number of students with disadvantages receiving additional resources in upper secondary education (again as a percentage of all students at that level). Of the 13 countries for which data are available there are no additional resources for students with disadvantages in 8 countries. The overall median percentage is 0.00%, with an inter-quartile range of 0.00% to 0.05%. However, two countries show percentages in double figures with Chile (30.70%) almost twice the next highest percentage.

Figure 4.29. **Number of students receiving additional resources over the period of upper secondary education in cross-national category C as a percentage of all students in upper secondary education, 2003**



StatLink http://dx.doi.org/10.1787/107243842326

Data on the location of the education of these students at upper secondary level are available for four countries, as shown in Figure 4.30 – they repeat the pattern found at primary and lower secondary – Belgium (French Community), Chile and Spain place all students receiving additional resources for social disadvantage in regular mainstream classes, while the Slovak Republic places all such students in special schools.

Figure 4.30. **Percentages of students receiving additional resources over the period of upper secondary education in cross-national category C by location, 2003**



StatLink http://dx.doi.org/10.1787/107251435430

Comparisons between numbers at different levels of education – cross-national category C

Pre-primary/Primary

As was found above in analysing the data on children with disabilities and with difficulties, most percentages are smaller at pre-primary level than the corresponding percentages at primary level but this is not a strong effect here. Table 4.7 gives details for the five countries where comparisons can be made (excluding countries with no children in C categories at either level). Median values for this restricted set are 1.23% at pre-primary and 5.02% at primary level, with the pre-primary percentage exceeding that at primary for three of the five countries (insufficient data to assess statistical significance). Apart from Belgium (French Community) where the difference between the two phases is small, it is notable that both the two increases from pre-primary to primary (Mexico and Spain), and the two decreases (the Czech Republic and the Slovak Republic) are very substantial.

Table 4.7. **Comparison of numbers of children with disadvantages receiving additional resources in pre-primary and primary education as a percentage of all children in that phase of education, 2003**

	Pre-primary	Primary
Czech Republic	0.43	0.04
Slovak Republic	0.65	0.01
Spain	1.23	5.02
Belgium (Fr.)	12.85	11.61
Mexico	16.01	38.48

As in all previous comparisons between phases, countries show consistency of provision across the two phases; *i.e.* those with higher percentages at pre-primary tend to have a high percentage at primary, and conversely. The positive correlation here reaches significance even with the small number of comparisons possible (Spearman's rho = +0.90, $N = 5$, $p < 0.05$).

Primary/Lower secondary

Comparing primary and lower secondary percentages for countries presenting data at both primary and lower secondary levels (excluding countries with no students in cross-national category C at both levels), the pattern for students with difficulties is as illustrated in Table 4.8, (median at primary 5.02%, at lower secondary 1.41%). Three countries show increases from primary to lower secondary, two show decreases (insufficient data to assess statistical significance). Once again, countries show consistency of provision across the two phases; *i.e.* those with higher percentages at primary tend to have a high percentage at lower secondary, and conversely. The rankings by size are identical (Spearman's rho = + 1.00, $N = 5$, $p < 0.05$).

Lower secondary/Upper secondary

Comparing percentages at lower and upper secondary levels (Table 4.9) shows a significant drop in percentages between the two levels in countries where comparative data are available (median lower secondary 1.41%, upper secondary 0.05%). Only one country shows a (very small) increase from lower secondary to upper secondary, while four show decreases (insufficient data to assess statistical significance).

Table 4.8. **Comparison of numbers of children with disadvantages receiving additional resources in primary and lower secondary education as a percentage of all children in that phase of education, 2003**

	Primary	Lower secondary
Czech Republic	0.01	0.04
Slovak Republic	0.04	0.15
Spain	5.02	1.41
Belgium (Fr.)	11.61	16.03
Mexico	38.48	20.25

Table 4.9. **Comparison of numbers of children with disadvantages receiving additional resources in lower and upper secondary education as a percentage of all children in that phase of education, 2003**

	Lower secondary	Upper secondary
Slovak Republic	0.04	0.05
Czech Republic	0.15	0.14
Spain	1.41	0.03
Belgium (Fr.)	16.03	15.63
Mexico	20.25	0

Interestingly, this is the only one of the nine comparisons made in Tables 4.1to 4.9 where there is little correlation between the numbers at the two levels in the countries for which data are available (Spearman's rho = –0.30, N = 5, $p > 0.05$), although care must be taken not to over-interpret this result given the small numbers of countries involved.

Comparisons between the cross-national categories

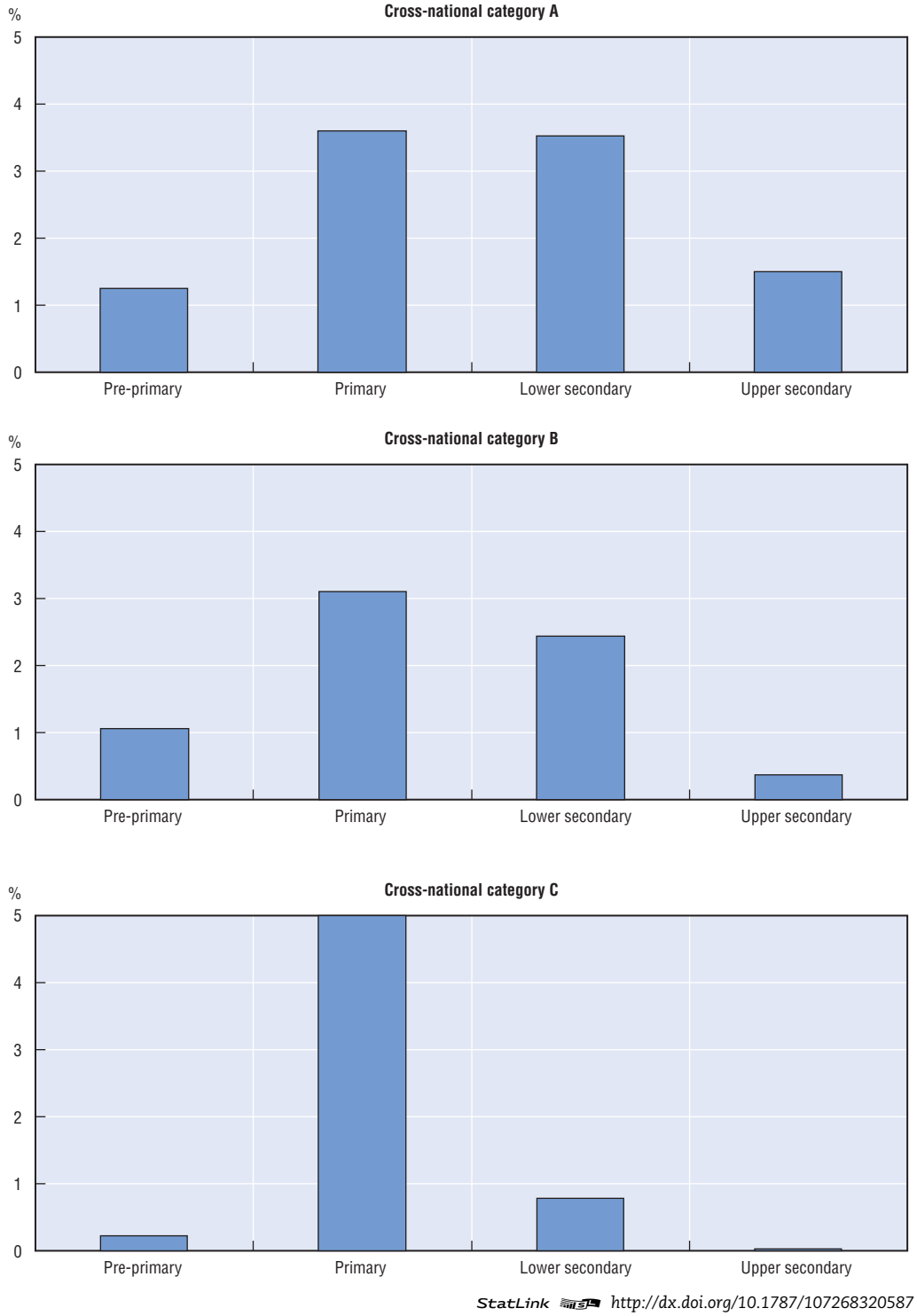
The period of compulsory education

Table 4.10 provides comparison data restricted to the ten countries for which data are available for all cross-national categories. The median values for A, B and C respectively are now 2.80%, 3.22% and 8.57%. Inter-quartile ranges are 1.82% to 3.33% for A, 1.58% to 5.64% for B, and 0.09% to 21.66% for C.

Table 4.10. **Comparison of percentages of children in cross-national categories A, B and C over the period of compulsory education (countries for which data available for all three categories), 2003**

	A	B	C
Mexico	0.73	1.61	34.83
Chile	0.97	4.81	19.85
Germany	1.59	2.81	0
Netherlands	2.52	7.49	22.26
Belgium (Fr.)	2.63	1.57	13.71
Spain	2.97	3.62	3.43
United Kingdom (Eng.)	2.99	12.33	0
Slovak Republic	3.45	0.59	0.16
Belgium (Fl.)	3.80	1.53	24.19
Czech Republic	4.25	5.91	0.07

Figure 4.31. **Mean number of students receiving additional resources at different levels of education by cross-national category, as a percentage of all students in that level of education, 2003**



StatLink http://dx.doi.org/10.1787/107268320587

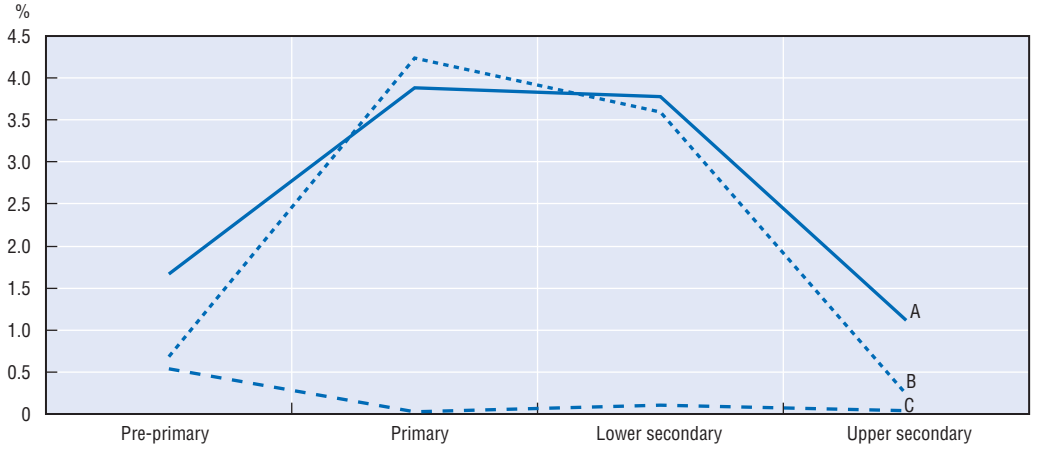
The differences between the median values for the three cross-national categories do not approach significance, even though the median value for C is substantially greater than that for either A or B. This is explained by the very large variation in C percentages where several countries show values far in excess of those at A or B, while others have percentages close to zero and substantially lower than those for A or B.

Overall comparisons across the phases of education for the three cross-national categories

Figure 4.31 compares the average percentage of students receiving additional resources at different levels or phases of education separately for students with disabilities, difficulties, and disadvantages. In each case the average is for those countries for which data are available for all phases of education (including those countries where a particular category is not applicable or another known zero). The countries contributing vary from A to B to C, and therefore any comparisons between the numbers of students in different cross-national categories are somewhat dubious. However, the main point of interest here is in making comparisons between the relative sizes of percentages through the educational system for A, B, and C separately.

Figure 4.32 restricts the analysis to the four countries (the Czech Republic, the Slovak Republic, Spain and the United Kingdom [England]) for which there are data at all levels of

Figure 4.32. **Median number of students receiving additional resources at different levels of education by cross-national category, as a percentage of all students in that level of education (restricted to the four countries with data at all levels and for each cross-national category), 2003**



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education and for each cross-national category (including the situation, as in the United Kingdom [England], where it is known that a data point is zero). The essential difference between the pictures presented in the two charts concerns the number of students at primary level in cross-national category C (which is the lowest value in Figure 4.32 and the highest in Figure 4.31). This is explicable when it is noted that the four countries from whom data are taken in Chart Figure 4.32 are all examples of those countries with very low or zero cross-national category C percentages, while Figure 4.31 includes examples from the other sub-group of countries with very high cross-national category C percentages at this level. Anomalies of this kind are likely to continue to occur when the numbers of countries able to present adequate data on these aspects is disappointingly low.

Summary and conclusions

The data presented in this chapter reveal large differences among countries in terms of the numbers of students with disabilities, difficulties and disadvantages receiving additional resources, although these differences appear smaller than those found when comparing individual national categories (see Chapter 3). Similarly, there is considerable variation among countries in terms of the settings – segregated or not – where these students are educated. Chapter 9 provides further discussion of and possible explanations for these differences.

In most countries, there are higher percentages of students receiving additional resources in all three categories at the primary and lower secondary levels of education compared to pre-primary and upper secondary levels. A possible explanation for the lower proportions of these children at pre-primary level could be that they are harder to identify before entering compulsory education. Finally, there is on the whole consistency of provision between consecutive levels of education in most countries; that is, countries with relatively high proportions of students receiving additional resources in one phase of education tend to have high proportions at the next level up and *vice versa*.

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Chapter 5

Additional Analyses of the Quantitative Data

Introduction

This chapter focuses on what the data tables show about the different physical locations in which students receiving additional resources for disabilities, difficulties or disadvantages are educated. The simple categorisation, employed in the previous chapter, of special schools, special classes in mainstream schools, and regular classes in mainstream schools, is again used. Several other aspects are also analysed including student-staff ratios, gender ratios for these students in different settings and categorisations and the age distributions of the students in a number of national systems. There is further discussion of the issues underlying the over-representation of males in the provision of additional resources in Chapter 8.

Special schools

The amount of segregated provision in the form of special schools differs widely from country to country. As Table 5.1 shows, the number of such institutions expressed as a proportion of the total school population over the period of compulsory education varies from 2.06 to 122.84 per 100 000 students, with a median value of 32.45 and quartile values of 18.74 and 38.96 for the fifteen countries for which data are available. Median values for the countries for which comparative data are available across all levels are 23.98 centres per 100 000 children at pre-primary level; 45.77 schools at primary, 26.04 at lower secondary level; and 20.53 at upper secondary; however, there is considerable varation in

Table 5.1. **Number of special schools by level of education relative to total school population (public and private, all categories), 2003**

	Compulsory education	Pre-primary	Primary	Lower secondary	Upper secondary
Belgium (Fl.)	36.26	40.31	45.29	27.34	x
Belgium (Fr.)	32.73	49.06	46.26	26.04	x
Chile	27.60	x	x	x	a
Czech Republic	86.60	x	x	x	49.77
Finland	38.84	x	x	x	4.57
Germany	31.11	16.32	m	m	m
Hungary	19.88	23.82	x	x	x
Japan	16.40	9.36	12.46	24.01	20.53
Mexico	122.84	m	167.81	2.57	a
Netherlands	69.39	x	68.97	39.87	x
Slovak Republic	32.45	24.15	x	x	21.46
Spain	10.60	x	x	x	a
Switzerland	39.09	a	x	x	a
Turkey	2.06	m	2.06	a	0.53
United Kingdom (Eng.)	17.59	x	x	x	x

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Note: Number of schools per 100 000 of total school population at that level.

school numbers both across levels and across countries. As noted above, the numbers of special schools relative to the population tends to be lower at pre-school and upper secondary levels. Mexico presents by far the largest drop in numbers of special schools from primary to lower secondary levels, with 167.81 schools per 100 000 students at primary level to 2.57 at lower secondary level.

Table 5.2 shows that the average size of special schools over the period of compulsory education varies substantially from country to country.

Table 5.2. **Mean number of students at special schools by level of education (public and private, all categories), 2003**

	Compulsory education	Pre-primary	Primary	Lower secondary	Upper secondary
Belgium (Fl.)	141.06	19.07	135.58	138.76	x
Belgium (Fr.)	128.34	12.72	100.31	145.96	x
Chile	41.01	x	x	x	a
Czech Republic	45.13	x	x	x	64.43
Finland	46.76	x	x	x	182.00
Germany	125.13	18.64	m	m	m
Hungary	106.21	13.96	x	x	x
Japan	28.72	11.19	33.53	23.91	53.95
Mexico	51.64	m	51.59	193.19	a
Netherlands	87.26	x	89.03	88.85	x
Slovak Republic	79.20	19.78	33.72	47.66	79.44
Spain	56.19	x	x	x	a
Switzerland	46.53	a	x	x	a
Turkey	70.67	m	70.67	a	62.38
United Kingdom (Eng.)	64.32	x	x	x	x

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The median value for compulsory education is 64.32 students per school, with quartiles at 46.65 and 96.73. Four of the 15 countries for which full data are available average over 100 students per school, Belgium (Flemish Community) has the largest average size at 141.06. The lowest average size is in Japan (28.72).

Comparisons between the levels for the countries contributing data at each of the levels show that pre-primary centres are very small (median value 16.30, ranging in size from 12.72 in Belgium [French Community] to 19.78 in the Slovak Republic). Average sizes of special schools at primary level are substantially larger (median size 70.67). Belgium (Flemish Community) with 135.58 and Belgium (French Community) with 100.31 students on average per primary special school are almost twice the size of the next largest average size, and dramatically higher than the pre-primary figure (19.07 and 12.72 respectively). For the four countries where data are available for both pre-primary and primary levels, the latter are all larger. Sizes at lower secondary are somewhat higher (median 113.80), although there is a huge variation from 23.91 students (Japan) to over 190 (Mexico). Two countries show a decrease in size from primary to lower secondary and four countries show an increase when comparative data are available. Upper secondary schools are small in size, with a median value of 64.43 students per school in the five countries where data are available.

In 7 of the 13 countries for which full data are available over 90% of special schools are publicly provided as indicated in Table 5.3 (median value 92.83%, quartiles at 45.29% and 96.98%) over the period of compulsory education.

Table 5.3. **Percentage of public special schools (all categories), 2003**

	Compulsory education	Pre-primary	Primary	Lower secondary	Upper secondary
Belgium (Fl.)	35.48	34.38	35.90	34.78	x
Belgium (Fr.)	45.29	53.16	53.33	41.94	x
Chile	24.50	x	x	x	a
Czech Republic	92.83	89.44	92.65	93.51	93.03
Finland	96.98	x	x	x	46.15
Germany	81.76	93.34	m	m	m
Hungary	95.70	97.47	97.76	95.33	100.00
Japan	99.23	98.18	99.34	99.12	98.48
Mexico	99.82	99.96	99.84	93.16	a
Slovak Republic	97.87	94.59	97.81	98.69	100.00
Spain	39.83	x	x	x	a
Switzerland	46.33	a	x	x	a
United Kingdom (Eng.)	92.93	x	x	x	x

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In five countries however, less than half of the provision is public (Belgium [Flemish Community], 35.48%; Belgium [French Community], 45.29%; Chile, 24.50%; Spain, 39.83%; and Switzerland, 46.33%). Where data are available for different phases of education, the percentage of state (publicly funded) schools is remarkably consistent over phases in a particular country.

Special classes

Data on special classes are sparse compared with those available on special schools. Only four countries provide data which permit comparisons of the number of special classes per school for students receiving additional resources for disabilities, difficulties, or disadvantages as shown in Table 5.4a. Figures for the compulsory education period range from nearly four classes per school in the Czech Republic to one class per school in Turkey. Average class sizes, shown in Table 5.4b are, in most cases, small – typically about 10 students per class. There are insufficient data to make comparisons between class sizes at different phases of education.

Table 5.4. **Number and size of special classes, 2003**

5.4a. Average number of special classes per school (public and private, all categories)

	Compulsory education	Pre-primary	Primary	Lower secondary	Upper secondary
Czech Republic	3.83	1.39	2.48	2.87	1.33
Hungary	3.14	1.27	x	x	x
Slovak Republic	2.07	1.32	1.69	m	3.50
Turkey	1.13	a	1.13	a	a

5.4b. Average size of special classes (public and private, all categories)

	Compulsory education	Pre-primary	Primary	Lower secondary	Upper secondary
Czech Republic	11.33	11.20	10.75	12.10	10.50
Hungary	9.29	7.95	x	x	x
Japan	2.78	a	2.78	2.78	a
Slovak Republic	9.90	11.02	8.93	10.11	13.43
Switzerland	9.31	a	x	x	a
Turkey	9.26	a	9.26	a	a

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Regular classes

Information about the integrated provision made when students receiving additional resources for disabilities, difficulties or disadvantages are educated in the same classes as other students is crucial in any assessment of this type of provision. Unfortunately, it appears that this kind of information remains rarely available at national level when statistics are collected. In the current exercise only three countries, the Czech Republic, Hungary and Turkey were able to provide relevant data as given in Table 5.5.

Table 5.5. **Average number of regular classes per school with students receiving additional resources (public and private, all categories), 2003**

	Compulsory education	Pre-primary	Primary	Lower secondary	Upper secondary
Czech Republic	7.96	1.61	x	x	3.58
Hungary	2.97	1.12	x	x	x
Turkey	1.84	0.44	1.84	a	1.37

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Student/staff ratios

Tables 5.6a and 5.6b gather together the available data on student/staff ratios in special schools and special classes respectively. The ratios in special schools for the period of compulsory education, ranging from 4.33 (Belgium [French Community]) to 20.30 (Mexico, an extreme outlier, three times larger than the next highest country; the high ratio in this country can be mostly attributed to the addition of a large number of students from a new category, Compensatory Educational Needs), with a median value of 5.45; quartiles 4.99 and 6.14 are clearly highly favourable compared to those in regular education. Directly

Table 5.6. **Student/teacher ratios (public and private, all categories), 2003**

5.6a. Special schools

	Compulsory education	Pre-primary	Primary	Lower secondary	Upper secondary
Belgium (Fl.)	4.97	3.95	5.88	3.96	x
Belgium (Fr.)	4.33	9.00	5.44	3.53	x
Czech Republic	6.05	5.66	6.00	6.38	10.15
Finland	5.45	x	5.04	6.28	3.90
Germany	6.86	m	m	m	m
Hungary	5.28	3.66	x	x	x
Mexico	20.30	m	19.30	28.00	a
Slovak Republic	6.17	4.31	7.05	5.67	11.75
Spain	4.43	x	x	x	a
Turkey	m	m	m	a	7.92
United Kingdom (Eng.)	5.21	x	x	x	x

5.6b. Special classes

	Compulsory education	Pre-primary	Primary	Lower secondary	Upper secondary
Czech Republic	9.13	6.55	10.36	8.00	6.00
Finland	3.35	x	3.21	3.61	17.95
Hungary	6.55	1.25	x	x	x
Slovak Republic	8.37	8.31	8.02	7.56	4.70
Turkey	9.26	a	9.26	a	a

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comparable figures are not available but OECD figures for regular education in 2004 show ranges from 11 to 26 at primary level, and ranges from 11 to 30 at secondary level (see OECD, 2006). As figures for the compulsory education period might be expected to fall between those for primary and lower secondary, this strongly suggests that there is little or no overlap between the distribution of student/staff ratios in special schools and regular education. For the six countries for which some comparative data across levels are available no consistent pattern emerges. For the Czech Republic and the Slovak Republic there is a substantial increase in student/teacher ratio moving from lower to upper secondary level, whereas the reverse effect occurs in Finland.

Student/teacher ratios in special classes are very similar, with a tendency to be somewhat higher than in special schools. They range from 3.35 to 9.26 for the period of compulsory education (median value 8.37).

Relative numbers of male and female students receiving additional resources for disabilities, difficulties or disadvantages

Tables 5.6 to 5.7 show gender ratios from the 2003 data collection exercise, focusing on location and cross-national category analyses. The finding in earlier data collection exercises as reported in previous monographs (OECD, 2000, pp. 91-94; OECD, 2004a, pp. 109-113; and OECD, 2005, pp. 122-127) of a higher percentage of males than females is fully replicated. This typically approximates to a 60/40 male/female split in those receiving additional resources. Of the 227 data points in Tables 5.7 to Tables 5.9 only five show more females than males. Although the data are very patchy there do appear to be some systematic patterns. Percentages for disabilities cluster closely around the 60% value. Those for difficulties show somewhat greater variability and a tendency to higher

Table 5.7. **Gender ratios of students receiving additional resources for disabilities (cross-national category A) in public and private schools, 2003 (Table values are percentage of males)**

Special schools

	Compulsory education	Pre-primary	Primary	Lower secondary	Upper secondary
Austria	61.21	m	62.37	60.36	a
Belgium (Fl.)	60.02	65.65	59.70	60.08	60.82
Belgium (Fr.)	60.57	56.16	58.89	62.20	60.22
Czech Republic	58.45	m	58.47	57.76	61.27
Finland	65.70	65.83	66.19	64.94	62.72
Germany	62.45	m	m	m	m
Greece	65.04	69.69	64.79	61.18	58.75
Hungary	61.09	62.69	62.53	60.13	n
Mexico	58.98	58.82	58.95	57.27	n
Netherlands	69.37	x	69.57	m	68.17
Slovak Republic	57.01	60.83	56.59	57.08	59.32
Spain	61.28	61.14	61.28	60.34	a
Switzerland	65.02	a	x	x	a
Turkey	62.98	m	62.98	a	66.43
United Kingdom (Eng.)	69.63	65.62	70.21	69.66	66.07

Table 5.7. **Gender ratios of students receiving additional resources for disabilities (cross-national category A) in public and private schools, 2003 (Table values are percentage of males)** *(cont.)*

Special classes

	Compulsory education	Pre-primary	Primary	Lower secondary	Upper secondary
Czech Republic	59.14		61.87	56.03	33.33
Finland	x	x	x	x	53.77
Greece	62.79	68.05	65.02	44.27	100.00
Hungary	59.60	65.69	61.45	59.20	55.36
Slovak Republic	55.49	57.78	57.73	52.63	35.11
Turkey	61.43	a	61.43	a	a

Regular classes

	Compulsory education	Pre-primary	Primary	Lower secondary	Upper secondary
Czech Republic	61.51	m	59.89	63.26	55.17
Finland	65.83	65.00	66.66	64.41	71.14
Hungary	69.08	64.35	65.68	71.35	70.35
Mexico	60.77	65.33	60.72	62.93	m
Spain	60.95	60.53	61.30	60.35	58.90
Turkey	61.64	63.86	61.64	a	53.95
United Kingdom (Eng.)	69.69	65.68	70.18	69.64	66.05

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Table 5.8. **Gender ratios of students receiving additional resources for difficulties (cross-national category B) in public and private schools, 2003 (Table values are percentage of males)**

Special schools

	Compulsory education	Pre-primary	Primary	Lower secondary	Upper secondary
Austria	65.81	m	66.17	65.67	a
Belgium (Fl.)	68.33	81.66	66.39	87.97	82.22
Belgium (Fr.)	70.70	73.86	66.75	82.77	81.78
Czech Republic	72.90	m	71.29	74.62	a
Finland	73.24	62.50	73.93	72.85	61.99
Germany	63.79	64.04	m	m	m
Greece	61.48	m	57.95	70.59	m
Hungary	60.88	64.39	60.64	60.94	75.44
Mexico	61.35	61.83	61.18	59.37	n
Netherlands	65.78	m	67.20	m	61.87
Slovak Republic	86.63	33.33	83.33	91.43	a
United Kingdom (Eng.)	69.57	65.68	70.18	69.59	65.99

Special classes

	Compulsory education	Pre-primary	Primary	Lower secondary	Upper secondary
Belgium (Fr.)	a	a	a	a	83.33
Czech Republic	69.88	m	69.17	70.71	68.52
Finland	x	x	x	x	m(0)
Greece	68.77	62.50	68.96	66.84	55.43
Hungary	59.71	71.57	60.16	59.39	a
Mexico	a	a	a	a	58.51
Netherlands	58.51	m	m	m	a
Slovak Republic	66.64	50.00	65.89	67.45	a
Switzerland	61.60	a	x	x	a

Table 5.8. **Gender ratios of students receiving additional resources for difficulties (cross-national category B) in public and private schools, 2003 (Table values are percentage of males)** *(cont.)*

Regular classes

	Compulsory education	Pre-primary	Primary	Lower secondary	Upper secondary
Czech Republic	72.81	x	71.99	73.53	74.81
Finland	63.86	64.65	63.88	63.74	68.50
Hungary	68.02	63.71	65.71	71.00	69.69
Mexico	61.64	67.37	61.56	64.68	m
Spain	57.41	60.87	60.34	54.70	50.72
United Kingdom (Eng.)	69.83	65.70	70.17	69.67	66.09

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Table 5.9. **Gender ratios of students receiving additional resources for disadvantages (cross-national category C) in public and private schools, 2003 (Table values are percentage of males)**

Special schools

	Compulsory education	Pre-primary	Primary	Lower secondary	Upper secondary
Czech Republic	70.24	m	77.83	73.40	71.18
Mexico	47.91	50.10	47.91	n	n
Netherlands	65.29	x	66.10	x	63.94
Slovak Republic	75.00	55.56	52.17	78.26	36.91

Special classes

	Compulsory education	Pre-primary	Primary	Lower secondary	Upper secondary
Belgium (Fl.)	x	a	x	53.66	a
Belgium (Fr.)	m	m	m	54.59	a
Czech Republic	a	51.30	a	a	a
Netherlands	55.39	m	m	x	55.39
Slovak Republic	51.44	51.44	a	a	a
Switzerland	53.68	a	x	x	a

Regular classes

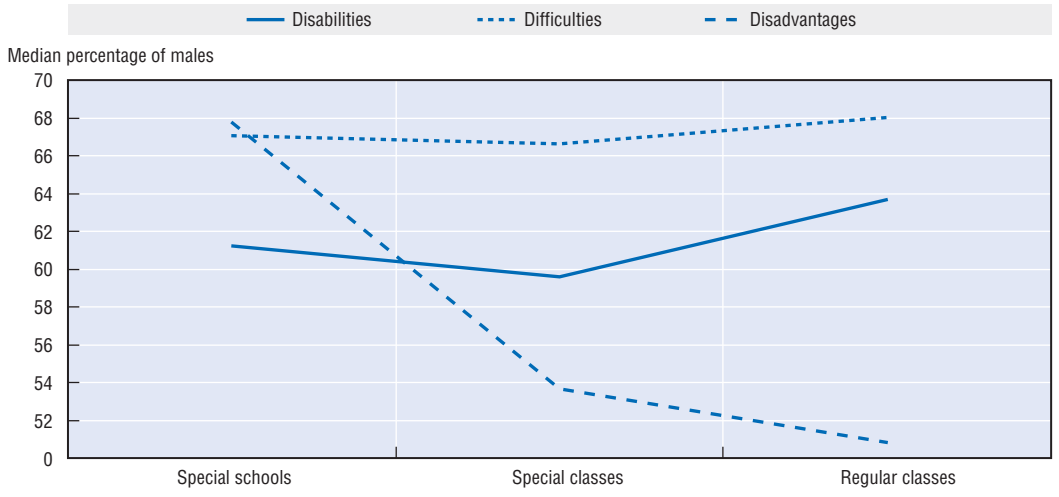
	Compulsory education	Pre-primary	Primary	Lower secondary	Upper secondary
Belgium (Fl.)	50.36	51.40	50.36	49.11	x
Belgium (Fr.)	50.08	51.13	50.50	50.82	49.27
Mexico	50.97	50.11	51.24	50.07	n
Netherlands	50.71	x	50.27	m	52.73
Spain	53.34	53.75	53.11	54.39	50.66

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percentages. The greatest variability is shown in the data for students with disadvantages. Typically the percentages of males are lower than those for disabilities or disadvantages, with many in the 50 to 60% range. However there are several data points showing very high male percentages. Figure 5.2 provides an illustration of these differences, for the period of compulsory education where there are the most adequate data.

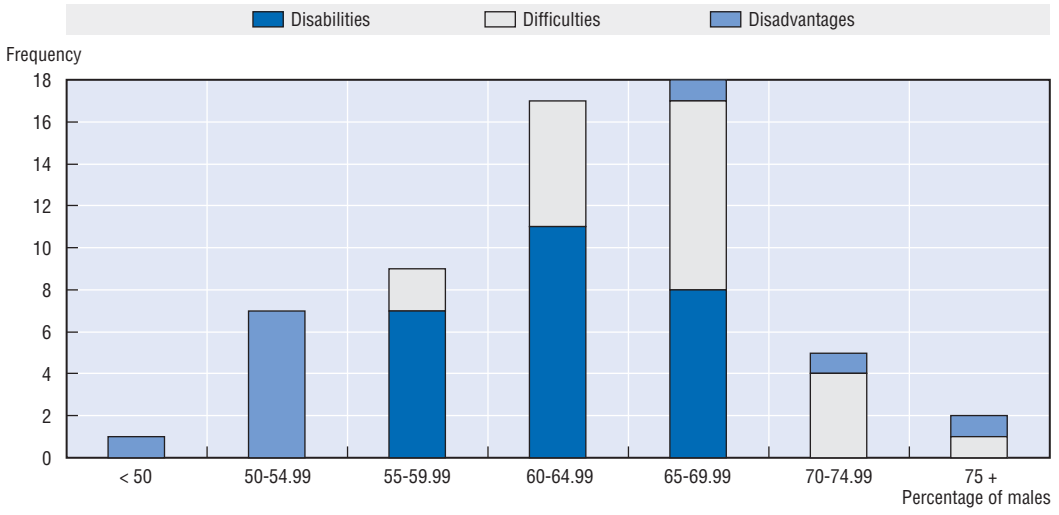
An alternative analysis is presented in Figure 5.1 where the difference between disabilities and difficulties percentages is relatively consistent across the different locations of education (special schools, special classes and regular classes). However, while

Figure 5.1. **Gender ratio by location and cross-national category (period of compulsory education), 2003**



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Figure 5.2. **Frequency of different percentages of male students (compulsory education), 2003**



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the percentages for students with disadvantages appears typically in the low fifties in special classes and regular classes, the male percentages of students with disadvantages educated in special schools is the highest of the nine data points in Figure 5.1.

These two charts should be viewed with caution as the countries contributing data points differ between the categories and inspection of Tables 5.6 to 5.7 shows that there are systematic between-country differences in gender ratios. The preferred approach of making such comparisons on the same set of countries results in there being too few countries to make meaningful comparisons.

Chapter 8 provides further discussion and analysis of the apparent over-representation of males both in the 2003 data set and previous data sets.

Age distribution of students receiving additional resources for disabilities, difficulties or disadvantages

These charts are derived from Table 5.7 of the data collection instrument which asks for data on students in all categories falling within the resources definition by age; *i.e.* it effectively sums across cross-national categories A, B and C. Cohort size is taken into account so that the figures presented are percentages of students in each age group.

Sixteen of the eighteen countries presenting data for 2003 were able to provide some form of breakdown by age of students with special educational needs. All sixteen countries provided data on special schools, six on special classes and four on regular classes. Figure 5.3a, Figures 5.4 to 5.5 illustrate the age distributions for special schools, special classes and regular classes respectively. Where gender data are available these are incorporated into the charts. It is once again noteworthy that the approximate 60/40 male/female split, discussed above in the section on gender breakdowns, remains strongly in evidence in the age breakdown data. Chapter 8 provides further discussion of this over-representation of males in the number of students receiving additional resources.

For special schools (Figure 5.3a) in most countries the charts show a steady increase in the proportion of students in special schools from four years of age up to about fourteen or fifteen years. There is commonly a sharp drop in proportion after this age. There are, however, notable exceptions. Japan shows a relatively flat profile from six to eleven years, and then some increase at twelve years after which the proportion stays constant until fourteen years. There is then a sharp increase at fifteen which is largely maintained until seventeen. Mexico and Spain show a contrasting trend. The proportion in Mexico gradually decreases with age, with plateaux from six to eleven years and from sixteen to nineteen years. The proportion in Spain shows a consistent rise from the below three years age range through to nineteen years. The United States also has one age range (from five to eleven years) where there is a very small year on year increase, and an older age range (twelve to seventeen years) where there is a very small year on year decrease. The eighteen year age range then shows a sharp increase with a substantially lower percentage at nineteen years. There is an indication in some countries of relatively large proportions at the young age ranges (five and below) followed by subsequent decreases (the Czech Republic, Switzerland and the United Kingdom [England]).

The pattern for special classes is more difficult to categorise. Broadly speaking, there is a tendency for an "inverted-u" distribution, with a tendency for lower proportions to be found at both the youngest and oldest age ranges. Japan again shows an essentially flat distribution with little change from the 10% level over the age ranges of six to fourteen years.

Somewhat similar "inverted-u" distributions are found in the four countries providing data for the proportion of students receiving additional resources in regular classes. Finland is atypical with the distribution peaking at seven years and then showing a gradual decrease in proportion with increasing age range.

Figure 5.3a. **Number of students receiving additional resources in special schools as a proportion of all students by age, 2003**

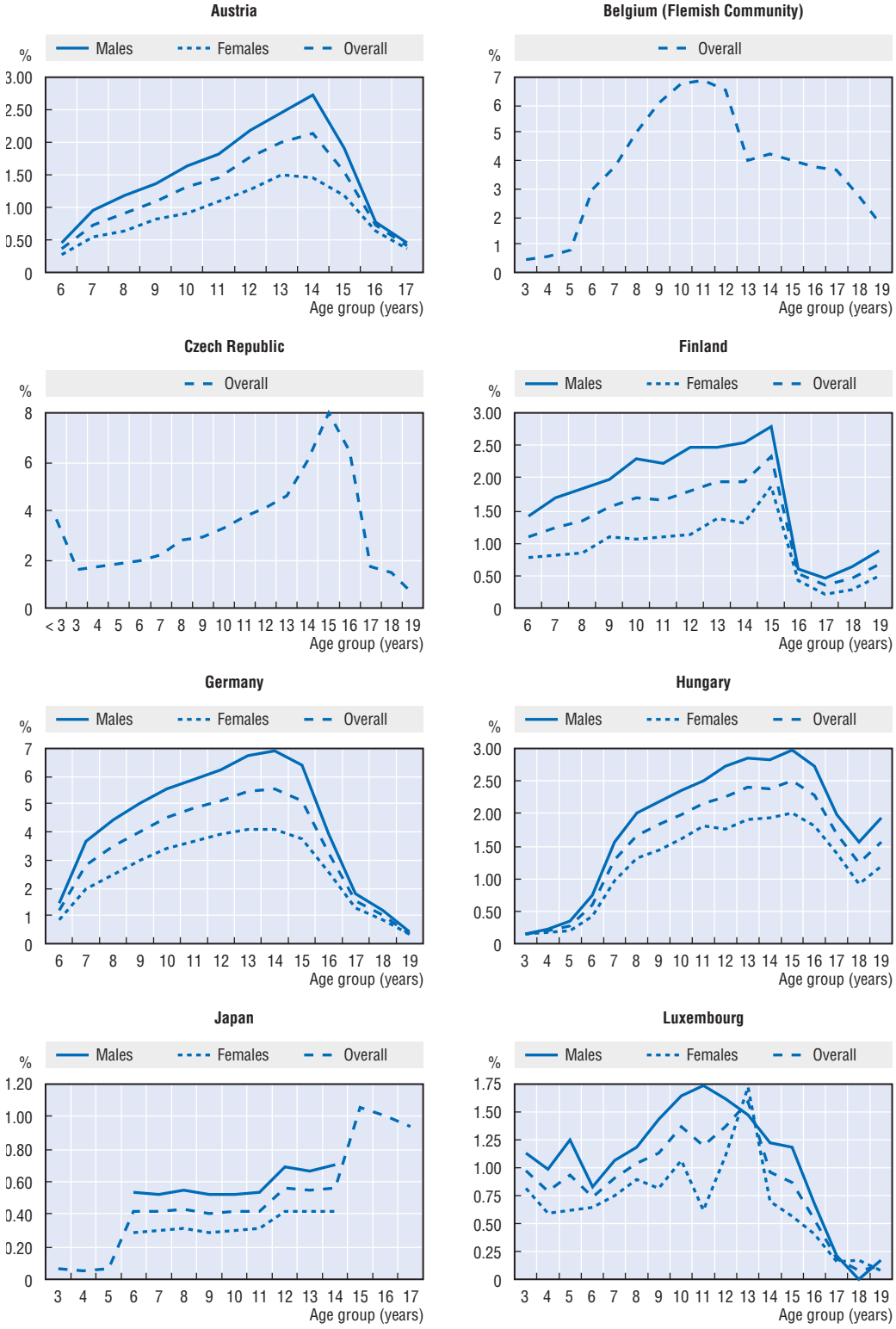
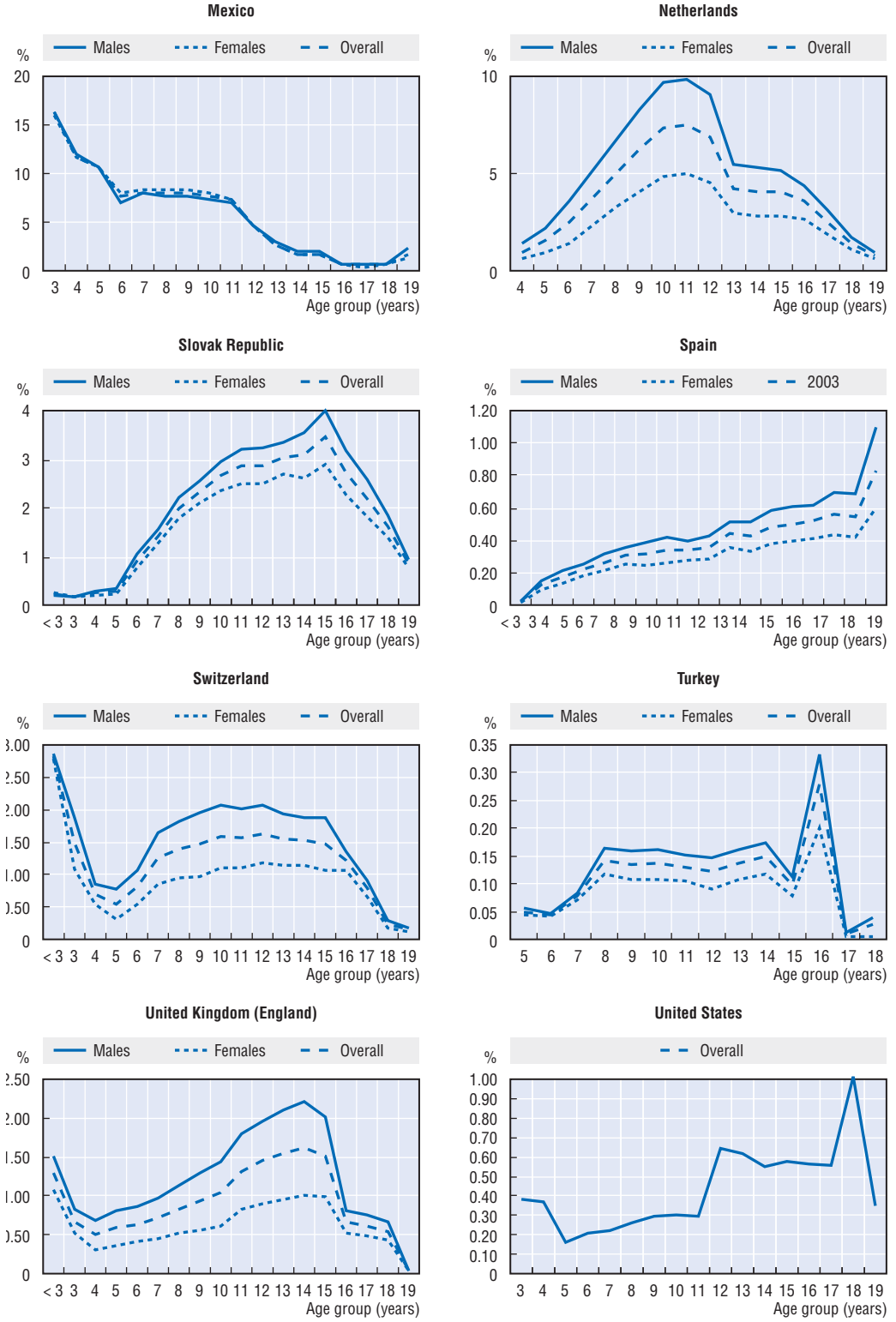
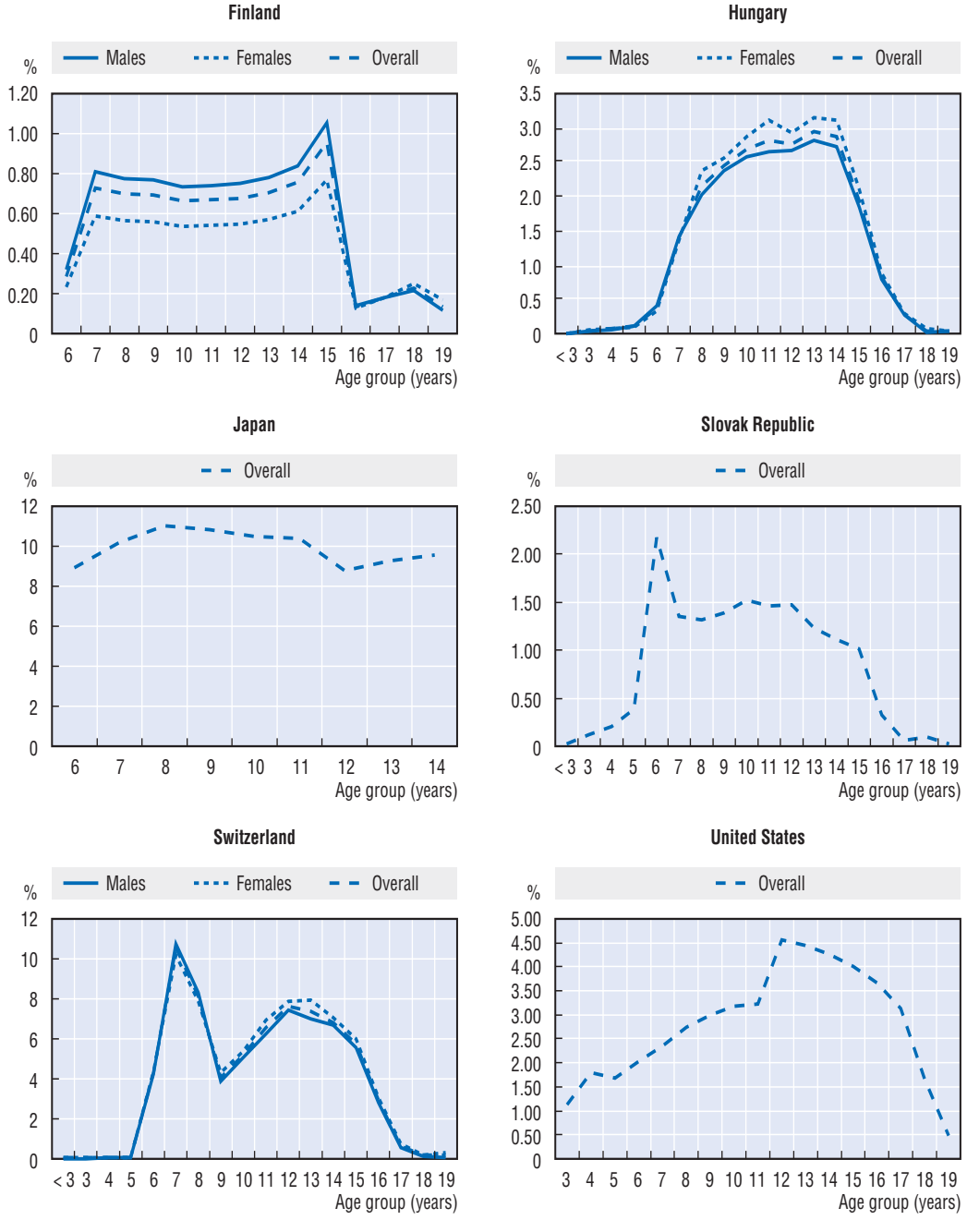


Figure 5.3b. **Number of students receiving additional resources in special schools as a proportion of all students by age, 2003**



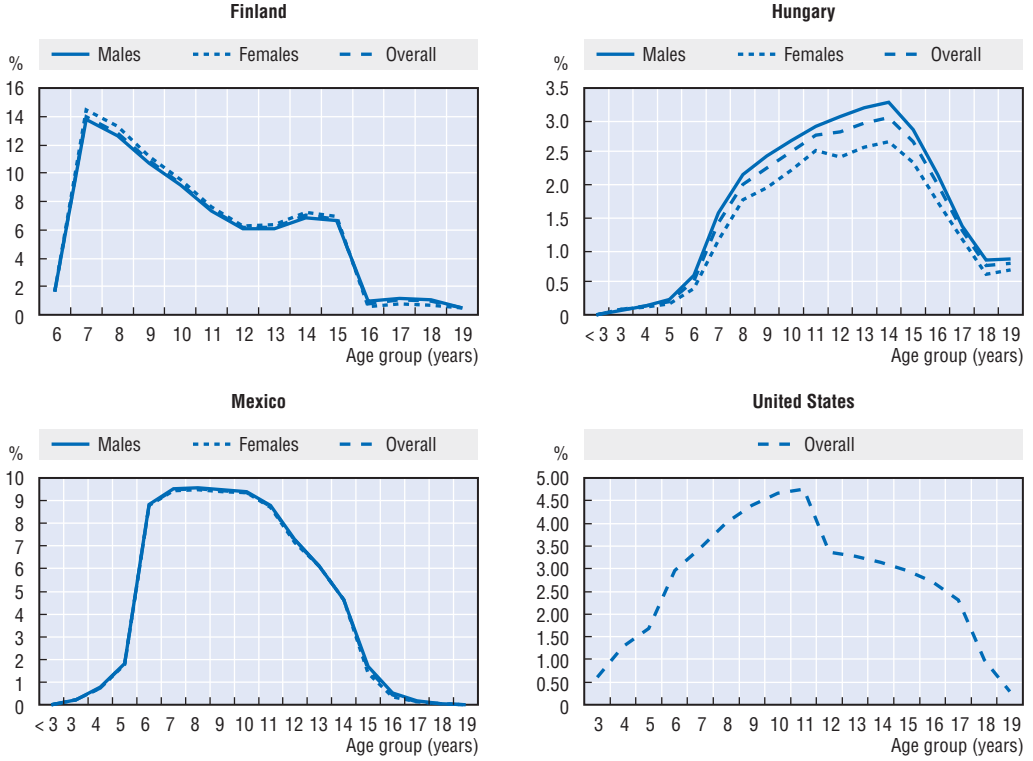
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Figure 5.4. **Number of students receiving additional resources in special classes as a proportion of all students by age, 2003**



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Figure 5.5. **Number of students receiving additional resources in regular classes as a proportion of all students by age, 2003**



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Students not registered within the education system

In the data collection exercise reported here an additional question was asked in Table 6 on the "total number of students not registered within the educational system administered by the Ministry of Education". Previous discussions indicated that there were such students in some countries. Their existence, in some countries but not others, is a potential biasing factor when making national comparisons.

Unfortunately, no countries were able to provide relevant data, although data returns indicated that in several countries there were such students but the relevant data were not available. It is clear that there may be a substantial biasing factor arising from the indication that several of the countries involved in this data collection exercise may be excluding an unknown number of students from the returns made, who in other countries may well be included in their returns. Whereas in some countries all students receiving additional resources for disabilities, difficulties or disadvantages are the responsibility of a ministry or department of education and/or are included in the return made by this ministry, in other countries for organisational or historical reasons some of these students are the responsibility of other ministries and may not be included in the returns made.

Conclusion

The chapter provides useful descriptive information about the amount and nature of the provision in different countries for students receiving additional resources for disabilities, difficulties or disadvantages. As established in the earlier monographs (OECD,

2000; 2004a; 2005) and confirmed here, there are generally high quality data on aspects of special school systems. Few countries are able to provide substantial amounts of data on provision in special classes. Data on the number of regular classes with students receiving additional resources is even patchier. It appears clear that these deficiencies can only be overcome by developing a somewhat different methodology for data collection. The final chapter considers possible ways forward.

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Chapter 6

Analysis of Trends in the Quantitative Data for 1999, 2001 and 2003

Background

As the collection of data on students with disabilities, difficulties and disadvantages in participating OECD countries has now been carried out for several years, the OECD has started to build up a longitudinal database that can be used to show trends for aspects of these data over time. In this chapter such trends – where available – are presented for the first time. There are of course still significant gaps in the availability of these data; the available information does, however, give a useful picture of the way the situation has been changing in recent years.

More specifically it is hoped that the data presented in this chapter can provide an overall picture of any changes in the numbers of students receiving additional resources in different categories as well as any shifts in the location where these students are educated (*i.e.* in regular or special classes, or in special schools). Sometimes data may only be available for two out of the three years, in which case interpretations of any changes should be made with caution if at all. Quite often large changes from one year to the next reflect policy developments in the area of special needs education and where possible information on such developments has been included when presenting and interpreting the data. It is also possible that a large difference in numbers is due to methodological changes, *e.g.* in the definition of a particular national category or the way individual categories are allocated to cross-national ones. Again, such changes have been pointed out where possible in order to help explain any substantial changes over time.

As this chapter focuses on trends over time, rather than new data for 2003 (which are presented in Chapters 3, 4 and 5), it only includes information on countries that have provided data for at least two of the following years: 1999, 2001 or 2003. Countries where only one data point is available are therefore not included in this part of the analysis. In addition, Finland, Greece and Hungary have not been included at all in these analyses, as their data collection methods have changed too much over the three years to allow meaningful comparisons. Countries in charts are ranked in ascending order of percentages of students or in decreasing order of share of regular classes for 2003.

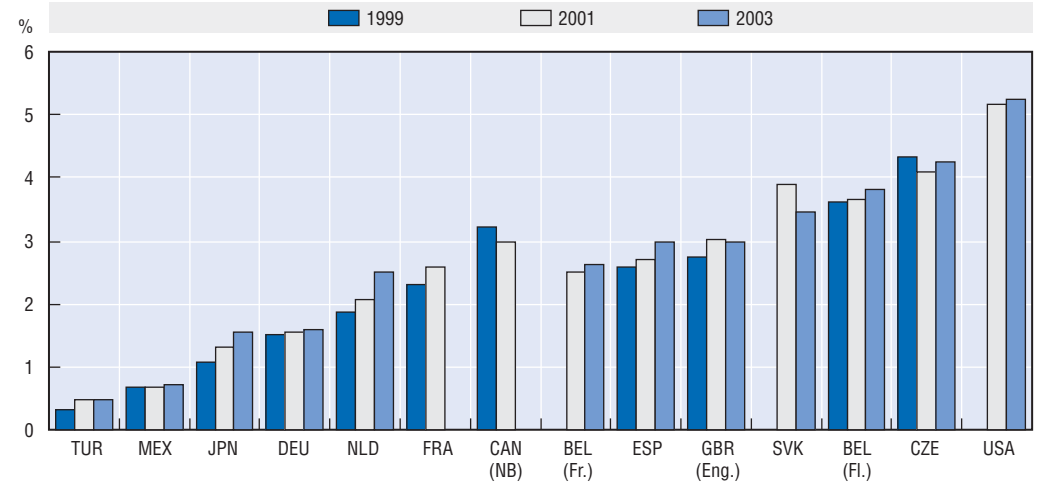
The first section of the chapter presents trend data in terms of the three cross-national categories A, B and C. Data are presented for the period of compulsory education first, followed by pre-primary, primary, lower secondary and upper secondary levels of education. Within this section, comparative trend data on specific national categories are presented in order to highlight particular aspects of the data. Finally, data on age groups and gender are presented and discussed in the last two sections.

Trends in cross-national categories

CNC A

Figure 6.1 shows that the Slovak Republic, the Czech Republic and Canada (New Brunswick) were the only countries that reported a drop over the period 1999-2003 in the percentage of students in cross-national category A in compulsory education. In all other

Figure 6.1. **Numbers of students in cross-national category A receiving additional resources over the period of compulsory education as a percentage of all students in compulsory education, 1999, 2001 and 2003**

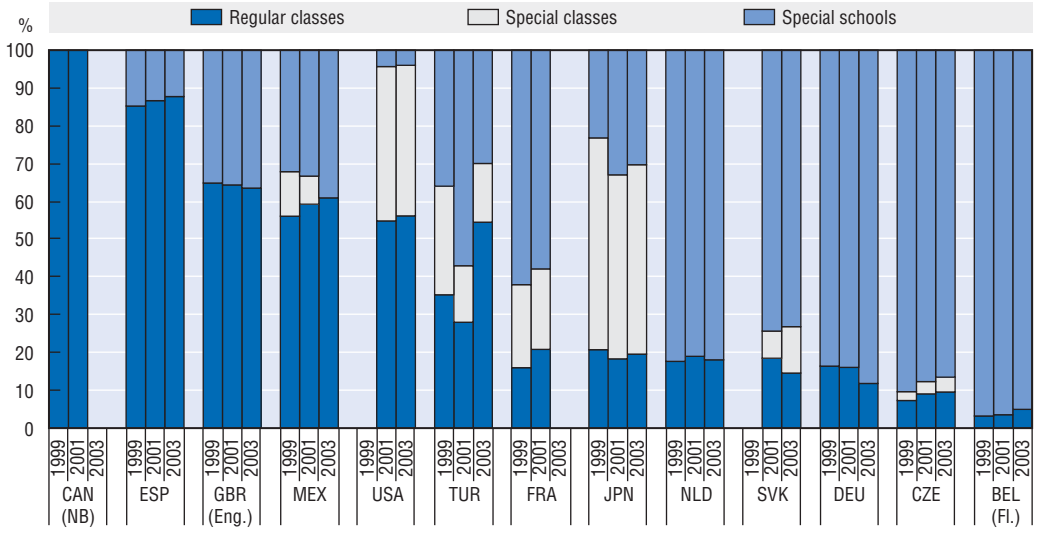


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countries, there was a small but continuous rising trend from 1999 to 2003. Wilcoxon's signed rank test for matched pairs showed that the percentages in 2003 were in fact significantly higher than those in 1999 ($T = 19$, $p < 0.05$, $N = 14$).[1] These increases in CNC A are not reflected in decreases in CNCs B or C (see below), indicating that more children are in general identified and receiving resources in CNC A rather than classified in a different category.

Figure 6.2 shows that overall there have been few changes over time in the settings where students in CNC A are educated. The majority of countries (Belgium [Flemish

Figure 6.2. **Percentages of students receiving additional resources over the period of compulsory education in cross-national category A by location, 1999, 2001, 2003**



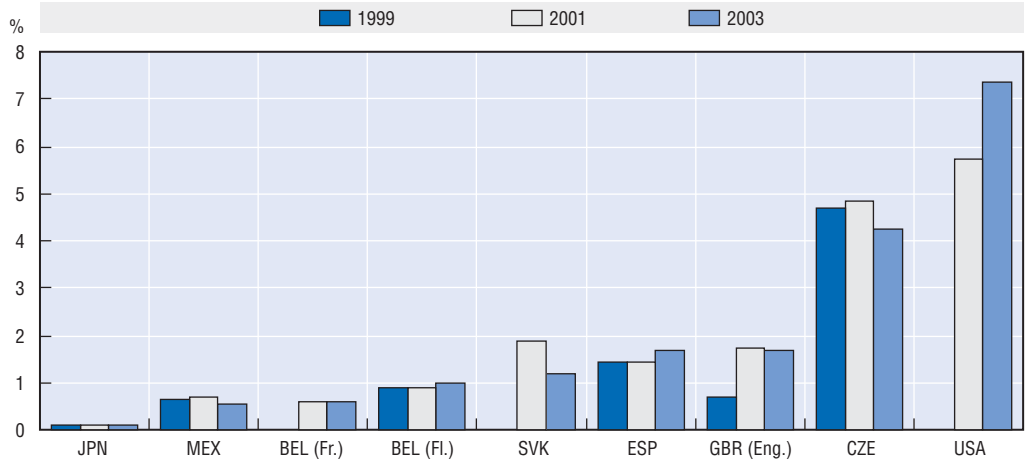
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Notes:
Data for special classes in Germany and Spain are included in special schools.
Data for special classes in United Kingdom (England) are included in regular classes.

Community], the Czech Republic, Finland, France, Mexico, the Slovak Republic, Spain and the United States) have shown a slight trend towards more inclusive provision, with a move away from special schools and towards special or regular classes.

As Figure 6.3 shows, the picture for pre-primary education is more mixed in terms of overall trends in numbers. Although some countries report a higher percentage of children

Figure 6.3. **Numbers of children in cross-national category A receiving additional resources over the period of pre-primary education as a percentage of all students in pre-primary education, 1999, 2001 and 2003**



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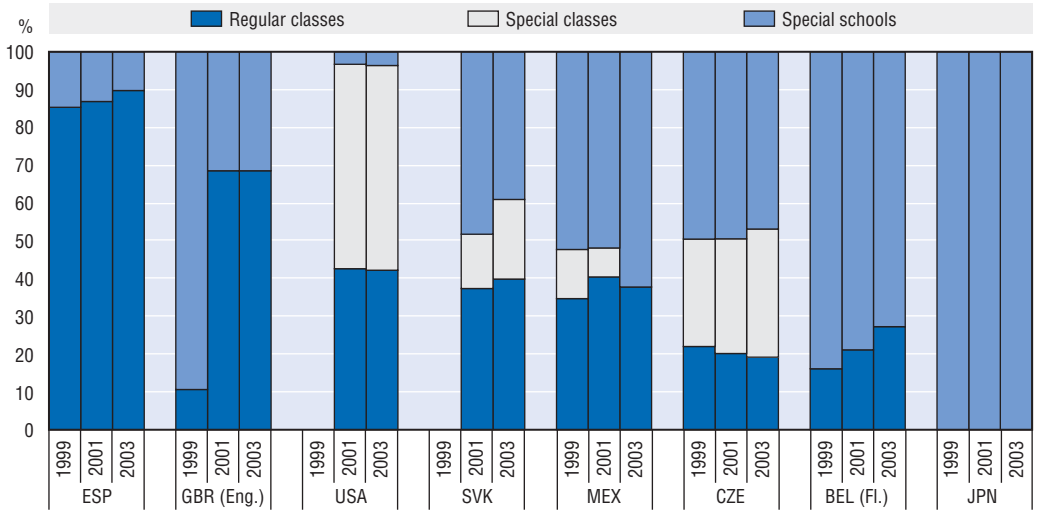
Note: Data for regular classes in Belgium (French Community) are not available.

in CNC A in pre-primary education receiving additional resources from 1999 to 2003 (Belgium [Flemish Community], Spain and the United States), there are several other countries (the Czech Republic, Mexico and the Slovak Republic) where these percentages show a downward trend. The greater scarcity of data for this level of education makes it more difficult to obtain a clear picture.

Figure 6.4 shows that in the countries where there have been changes over time in terms of location of children with disabilities at pre-primary education, the trend has on the whole been towards including more of these children in special and/or regular classes rather than special schools. In the United Kingdom (England), the change has been quite large, from roughly 10% of those children in regular and special classes in 1999 to approximately 70% in 2001 and 2003. According to officials from the Department for Education and Skills in the United Kingdom, this is in line with recent policy developments in this country focusing on early diagnosis and intervention, which, together with the general policy of inclusion, may explain why more young children with disabilities are placed in regular classes at pre-primary level.

Figure 6.5 shows that the overall trend at the level of primary education is again an increase in the number of children in CNC A from 1999 to 2003. This trend agrees with that presented in Figure 6.1 for the period of compulsory education, as the latter includes primary education in the countries concerned. In several countries this increase has been fairly small (Belgium (French Community), Mexico, Spain, Turkey). The most marked increase has been in the United States, with the percentage of primary school children in CNC A receiving additional resources rising from 6.08 in 2001 to 7.39 in 2003. A few

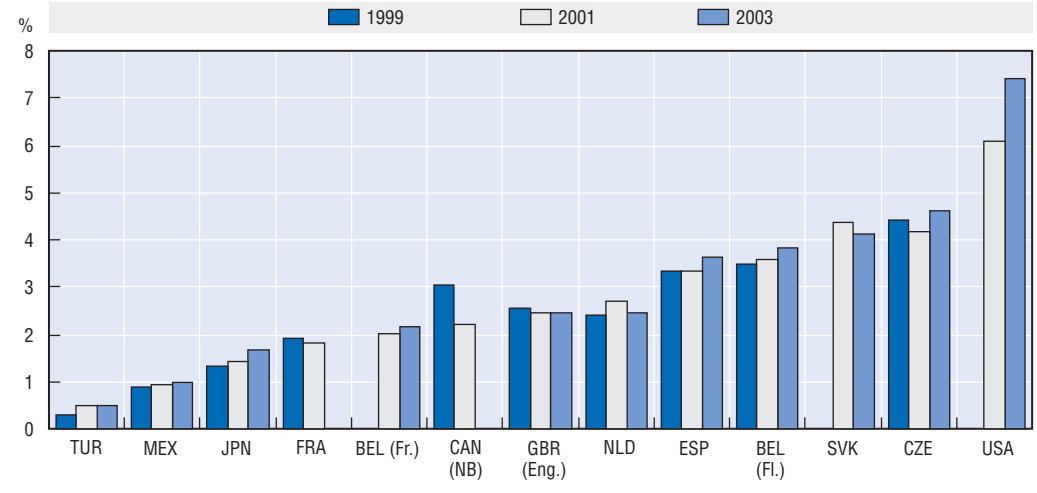
Figure 6.4. **Percentages of children receiving additional resources over the period of pre-primary education in cross-national category A by location, 1999, 2001, 2003**



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Notes:
Data for special classes in Spain are included in special schools.
Data for special classes in the United Kingdom (England) are included in regular classes.

Figure 6.5. **Numbers of students in cross-national category A receiving additional resources over the period of primary education as a percentage of all students in primary education, 1999, 2001 and 2003**



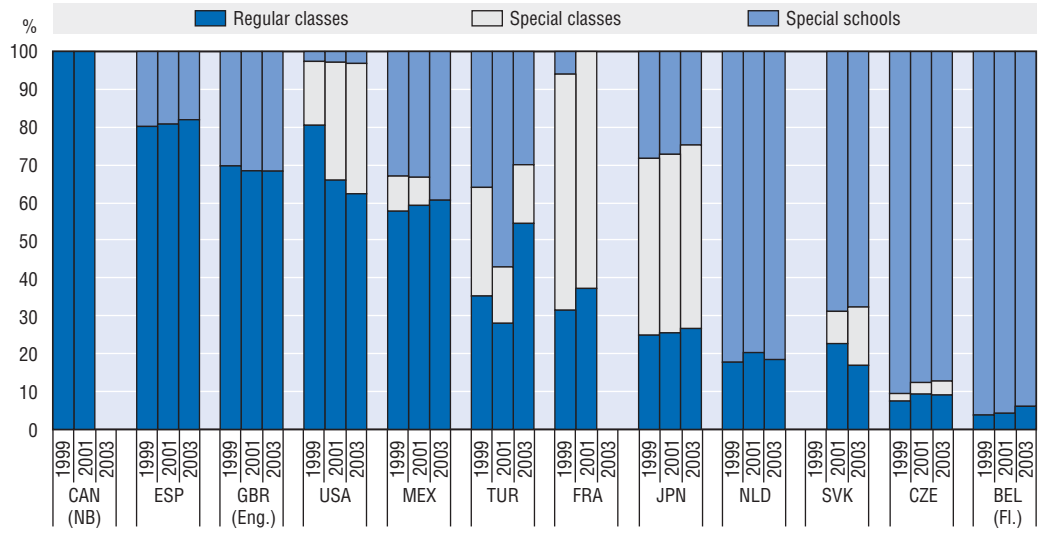
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Note: Data for regular classes in Belgium (French Community) are not available.

countries present a change in the opposite direction, *i.e.* an overall decrease in percentages, *e.g.* the Slovak Republic and the United Kingdom (England), although on the whole these decreases are quite small.

The most important changes in the locations where primary school children in CNC A are educated, as shown in Figure 6.6, have been in the Slovak Republic and the United States, where there has been an increase from 1999 and 2001 to 2003 in the proportion of

Figure 6.6. **Percentages of students receiving additional resources over the period of primary education in cross-national category A by location, 1999, 2001, 2003**



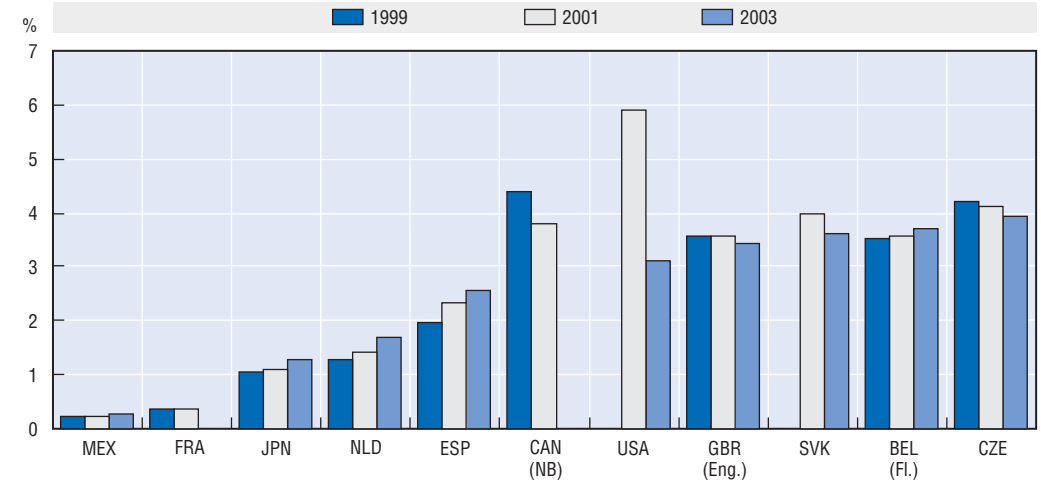
StatLink http://dx.doi.org/10.1787/107727716720

Notes:
Data for special classes in Spain are included in special schools.
Data for special classes in United Kingdom (England) are included in regular classes.

these children educated in special classes; and in Turkey, where there has been a decrease in the proportion of children in special schools during this period.

The data in Figure 6.7 indicate that rather more countries have shown downward trends from 1999 to 2003 in the case of students in lower secondary education, compared to other levels of education examined so far. Specifically, Canada (New Brunswick), the Czech Republic, the Slovak Republic, the United Kingdom (England) and the United States have reported a lower percentage of those students in 2003 compared to 2001 and/or 1999.

Figure 6.7. **Numbers of students in cross-national category A receiving additional resources over the period of lower secondary education as a percentage of all students in lower secondary education, 1999, 2001 and 2003**

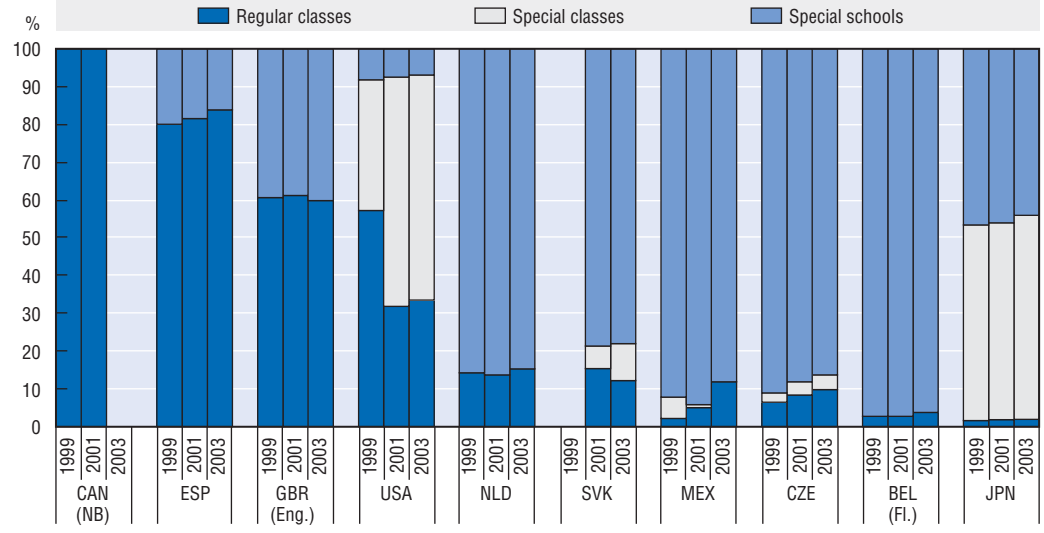


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In some countries this decrease is quite considerable (Canada [New Brunswick], the United States). In others (Belgium [the Slovak Republic, the United Kingdom [England]), it is of a much smaller magnitude.

In the case of the United States, the rather large change in percentages is due to a change in methodology that has affected the numbers of students in primary, lower and upper secondary levels. Previously, all students with disabilities between the ages of 12 and 17 were reported in the lower secondary education level. In 2003, only 5% of 12-year-olds, 50% of 13-year-olds, 98% of 14-year-olds, 86% of 15-year-olds, 30% of 16-year-olds and 10% of 17-year-olds with disabilities were reported in this level. The remaining 12-, 13- and 14-year-olds were reported in primary education level and the remaining 15-, 16- and 17-year olds were included in the upper education level.[2]

Figure 6.8. **Percentages of students receiving additional resources over the period of lower secondary education in cross-national category A by location, 1999, 2001, 2003**



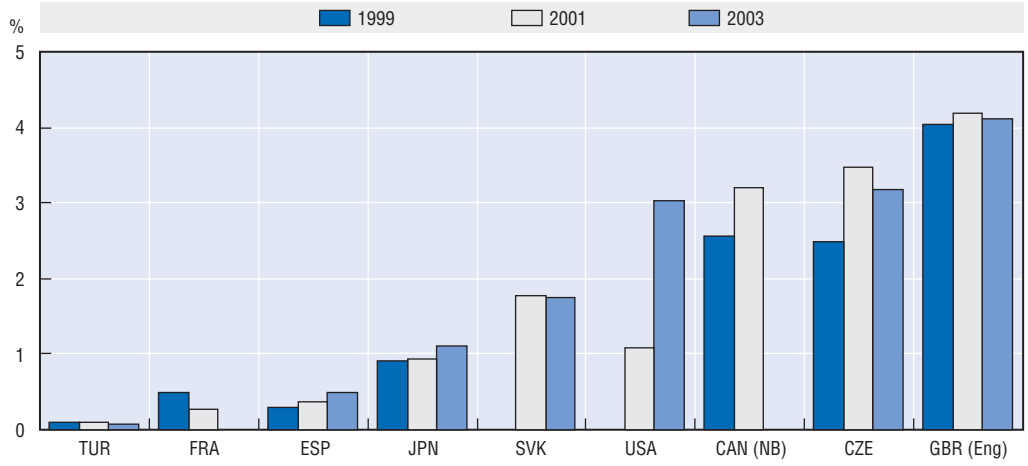
StatLink http://dx.doi.org/10.1787/107781383206

Note: Data in special classes in United Kingdom (England) are included in regular classes.

Figure 6.8 shows that the changes over time in the location of lower secondary education students has been small; in most countries there has been a slight increase in the proportion of students educated in regular or special classes as opposed to special schools over the four-year period. The United States is the only exception, as it has reported an increase in the proportion of students with disabilities educated in special classes, particularly from 1999 to 2001; a similar trend was also found in this country in the case of primary education (see Figure 6.6 above). However, it is likely that this difference is due to a change in methodology as described above: on the whole, students in the 12-17 age range are more likely to be in special classrooms, so when some of these students are included in the primary level count they raise the proportion in special classes.

Figure 6.9 shows that five out of the nine countries where data are available (Canada [New Brunswick], the Czech Republic, Japan, Spain and the United States) show an increasing trend in the percentage of students in CNC A in upper secondary education,

Figure 6.9. **Numbers of students in cross-national category A receiving additional resources over the period of upper secondary education as a percentage of all students in upper secondary education, 1999, 2001 and 2003**

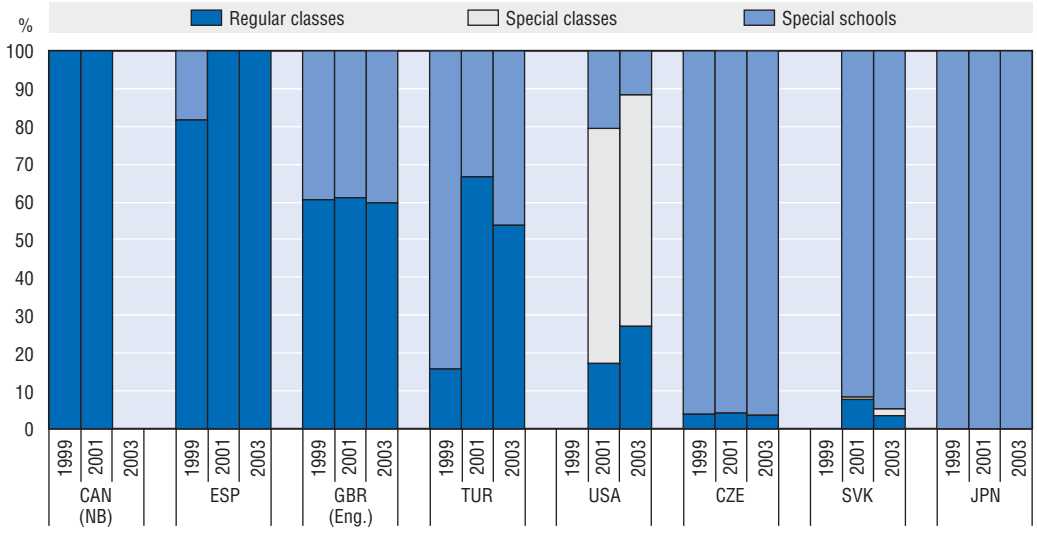


StatLink http://dx.doi.org/10.1787/107823835370

with the remaining four showing the opposite trend. It is therefore not possible to draw firm conclusions about the overall picture.

The largest changes in the location of students with disabilities in upper secondary education as shown in Figure 6.10 have been in Spain and Turkey. In the former, the special school category ceased to apply in 2001, indicating that all such students are as of that year

Figure 6.10. **Percentages of students receiving additional resources over the period of upper secondary education in cross-national category A by location, 1999, 2001, 2003**



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Notes:
Data for special classes in Spain are included in special schools.
Data for special classes in United Kingdom (England) are included in regular classes.
Data for special classes in Japan are negligible.

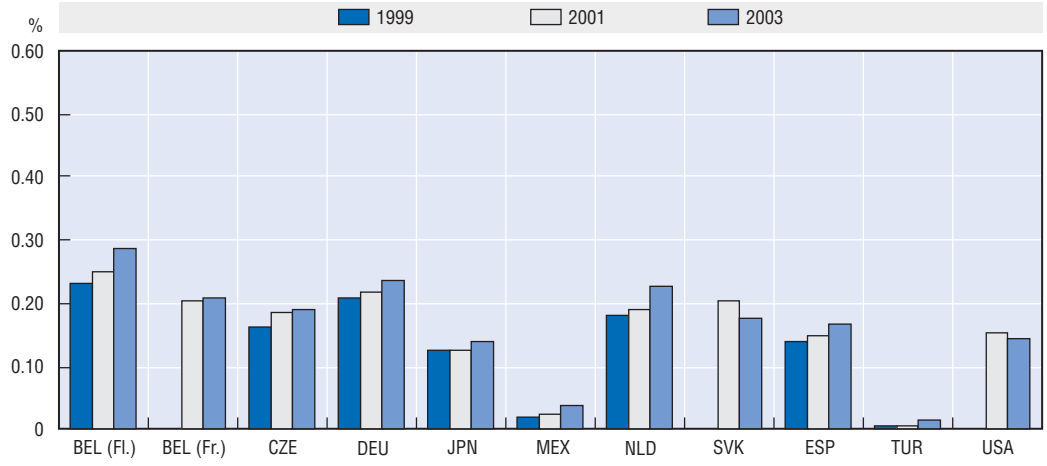
educated in regular classes. In Turkey, there has been a decrease in the proportion of upper secondary level students educated in special schools from approximately 85% in 1999 to roughly 35% in 2001 and 45% in 2003. An examination of the raw data reveals that the absolute number of upper secondary level students educated in special schools decreased substantially in 2001 but then increased considerably in 2003, whereas that of students educated in regular classes followed the opposite pattern during that period (a large increase in 2001 followed by a smaller decrease in 2003). The changes observed in the proportions of these students educated in different locations seem therefore to reflect changes in absolute numbers receiving additional resources rather than transfers of students from one location to another.

In what follows, data on compulsory education for six national categories that fall within CNC A are examined in more detail.

Physical disabilities

Figure 6.11 shows that in the six countries where data are available for all three years, the percentage of students with physical disabilities receiving additional resources in compulsory education has been rising during the period between 1999 and 2003. The increase is in line with the more general picture presented above for CNC A in Figure 6.1. Only in two countries (Slovak Republic and the United States) has there been a small decrease in this percentage from 2001 to 2003.

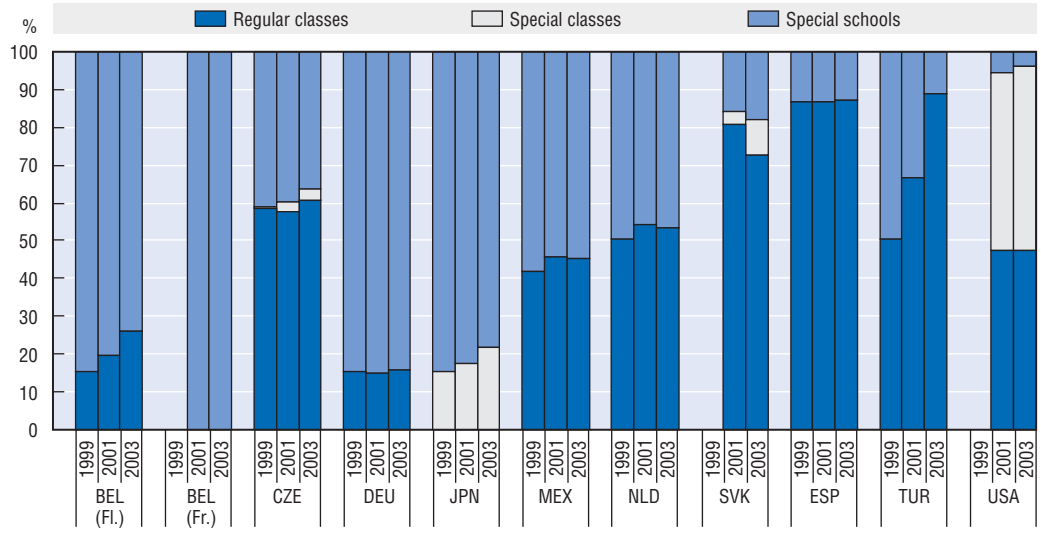
Figure 6.11. **Numbers of students with physical disabilities receiving additional resources over the period of compulsory education as a percentage of all students in compulsory education, 1999, 2001 and 2003**



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Figure 6.12 shows that some countries (Belgium [Flemish Community], the Czech Republic, Mexico, and Turkey) have increased the proportion of children with physical disabilities in compulsory education being educated in regular classes rather than in special schools or special classes over the four-year period. Examination of the raw data shows that in Belgium (Flemish Community) absolute numbers of physically disabled children increased both in regular classes and in special schools, although the increase was greater proportionally in the case of the former, resulting in the pattern depicted in Figure 6.12. In the case of Turkey, the number of students with physical disabilities

Figure 6.12. **Percentages of students with physical disabilities receiving additional resources over the period of compulsory education by location, 1999, 2001, 2003**



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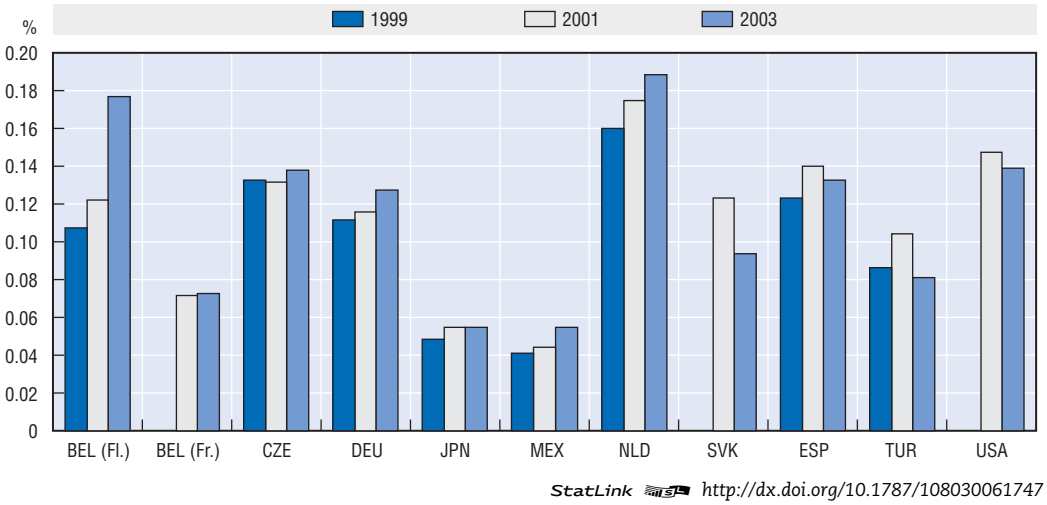
Note: Data for special classes in Germany and Spain are included in special schools.

educated in special schools has remained more or less stable, while there has been an increase in the number of those students receiving additional resources in regular classes. In general, it can be said that this trend towards more inclusive practices reflects a similar trend in overall CNC A data discussed above.

Deaf and partially hearing

Figure 6.13 shows that there seems to be a small increase in most countries in the percentage of students receiving additional resources because of deafness or hearing impairments at least for the period 1999 to 2001, although the trend is less clear for the

Figure 6.13. **Numbers of deaf and partially hearing students receiving additional resources over the period of compulsory education as a percentage of all students in compulsory education, 1999, 2001 and 2003**



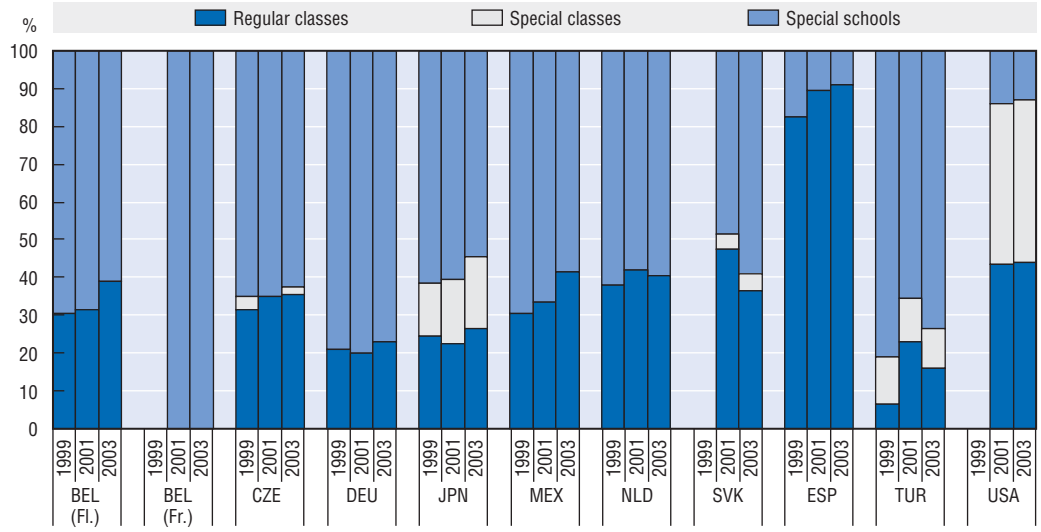
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Notes: Data for regular classes in Spain are overestimated in 2001.

period from 2001 to 2003. The Slovak Republic is an exception, with a considerable decrease in the percentages of these students from 1999 to 2003; according to officials at the Slovak Republic's National Institute of Education, it is likely that this decrease is due to the fact that these students have been gradually moved from special schools to regular classes and data on students with disabilities in the latter are likely to be less reliable.

Figure 6.14 shows that in most countries the proportion of deaf and partially hearing students in compulsory education educated in regular or special classes as opposed to special schools over the period 1999 – 2003 remaned stable or increased slightly. One exception again

Figure 6.14. **Percentages of deaf and partially hearing students receiving additional resources over the period of compulsory education by location, 1999, 2001, 2003**



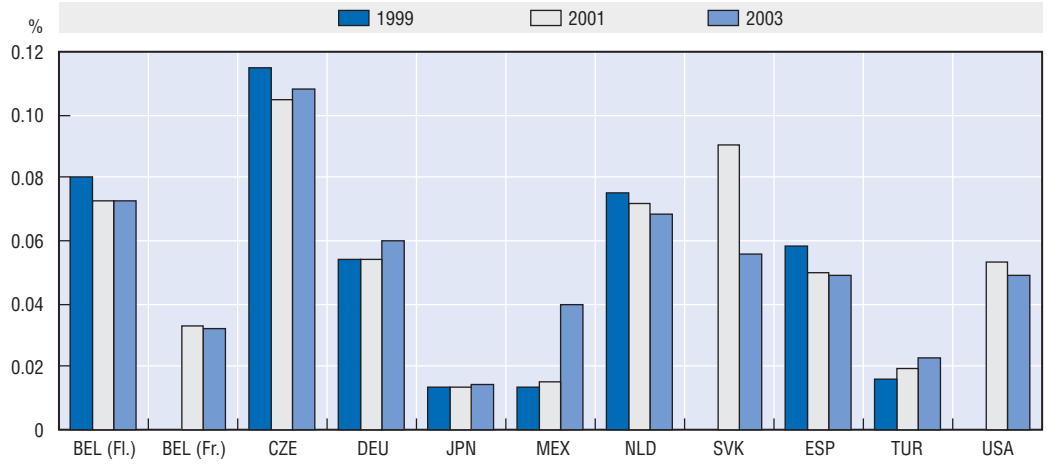
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is the Slovak Republic, where the proportion of deaf and partially hearing students educated in special schools has risen from just under 50% in 2001 to nearly 60% in 2003. A close examination of the raw data suggests that the number of deaf and partially hearing students receiving additional resources in regular classes in compulsory education has decreased (see above for a likely explanation to this decrease) whereas the number of those students educated in special schools has remained more or less stable; this would result in differences in the relative proportions in the different locations seen in Figure 6.14 above.

Blind and partially sighted

As can be seen in Figure 6.15, there seems to be no clear overall pattern in this category, with some countries registering a small increase over the four-year period, and others reporting a drop in the percentage of students with blindness or visual impairments in compulsory education receiving additional resources. Mexico presents the largest increases whereas the Slovak Republic has the biggest change in the opposite direction. In the case of the latter, it is likely that the reasons for this decrease are the same as in the case of students who are deaf or partially hearing; *i.e.* as these students are being moved from special schools to regular classes their numbers in the latter are underestimated. It is also worth pointing out that the numbers of these students as a percentage of the overall population are very small.

Figure 6.15. **Numbers of blind and partially sighted students receiving additional resources over the period of compulsory education as a percentage of all students in compulsory education, 1999, 2001 and 2003**

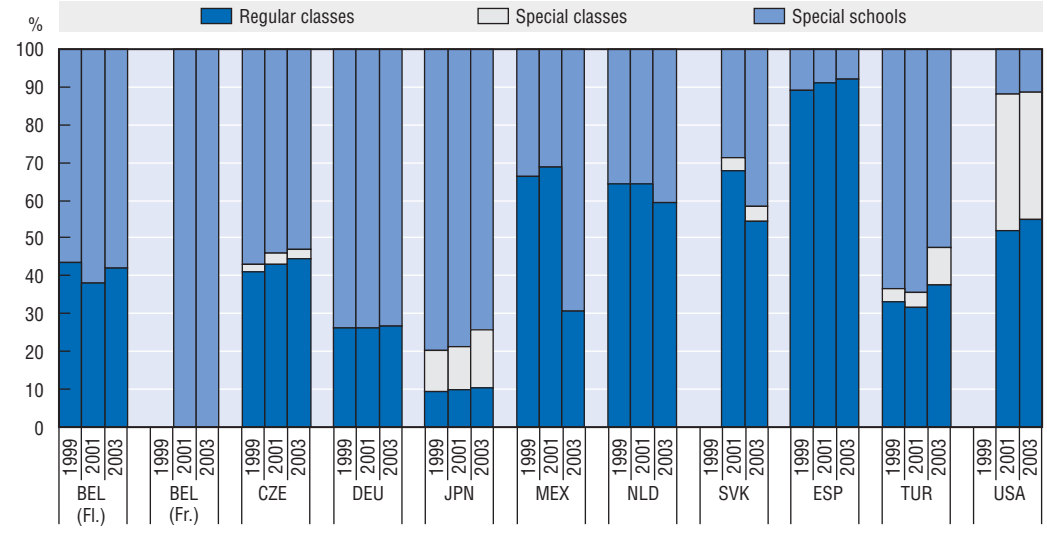


StatLink http://dx.doi.org/10.1787/10810212517

Note: Data for regular classes in Spain are overestimated in 2001.

Once more, as can be seen in Figure 6.16, there seems to be an overall trend for more inclusion of blind and partially sighted students in compulsory education in regular or special classes, although some countries (Mexico, Netherlands and the Slovak Republic) present changes in the opposite direction between 1999 and 2003, *i.e.* a reduction of the percentage of those students educated in regular classes with a corresponding increase in special schools. In the case of the Slovak Republic, there has been an overall decrease in the number of those

Figure 6.16. **Percentages of blind and partially sighted students receiving additional resources over the period of compulsory education by location, 1999, 2001, 2003**



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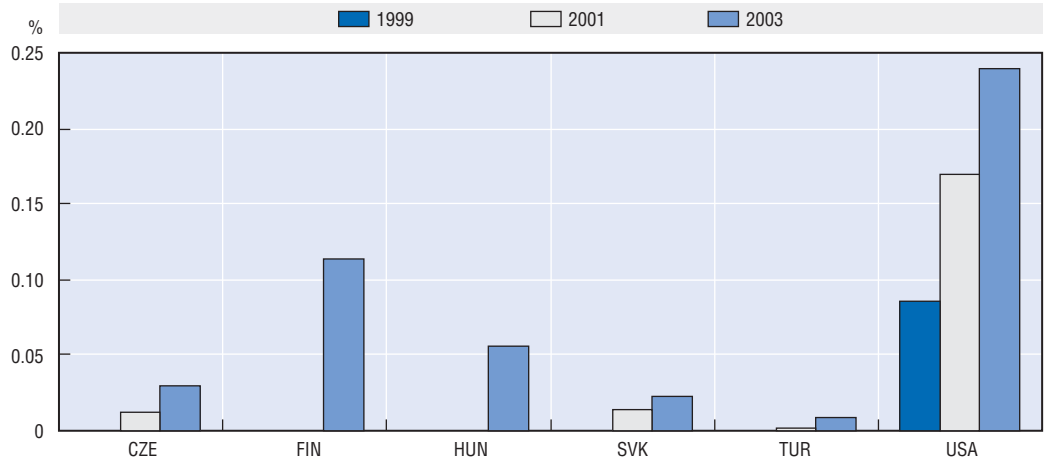
Note: Data for regular classes in Spain are overestimated in 2001.

students receiving additional resources both in regular schools and special classes, although the reduction in the number of those in regular classes has been greater (almost 50%).

Autism

Figure 6.17 shows that the only country where data are available for three years (the United States) presents a substantial increase in the percentage of students with autism receiving additional resources in compulsory education. The Czech Republic and Turkey also report increases from 2001 to 2003. It is also worth noting that the number of countries collecting and reporting data on this condition has increased over the years; in addition to the three countries above, Finland and Hungary provided data on autism in 2003.[3]

Figure 6.17. **Numbers of students with autism receiving additional resources over the period of compulsory education as a percentage of all students in compulsory education, 1999, 2001 and 2003**



StatLink http://dx.doi.org/10.1787/108203855051

Note: No national category in 1999 for the Czech Republic, Finland, Hungary and Turkey.

This increase in the number of children with autism receiving additional resources in compulsory education is in line with other data from recent epidemiological studies that have reported rising prevalence rates for autism and autistic spectrum disorders (ASD) in the population. For example, a recent study by Baird, Simonoff *et al.* (2006) reported a prevalence rate of childhood autism of 38.9 per 10 000 and that of other ASDs as 77.2 per 10 000, making the total prevalence of all ASDs 116.1 per 10 000 or just over 1%. These estimates were based on a sample drawn from a cohort of nearly 57 000 children in the south of the United Kingdom and contrast starkly with earlier figures of between 5 and 12 cases per 10 000 people reported in large population surveys (Grayson, 2006). Although it is not yet clear whether this increase is due to broader diagnostic criteria, better identification procedures or a true rise in incidence, similar increases in prevalence rates have been reported in several studies recently and our data seem to support this trend. This issue will be discussed in more detail in a future publication.

There has been an overall decrease in the proportion of autistic students in compulsory education educated in special schools, with a corresponding increase in the percentage included in regular or special classes as shown in Figure 6.18. The most significant change appears in Turkey, with an increase of the percentage of these students in special classes from around 4% in 2001 to over 30% in 2003; so most of the new students receiving

Figure 6.18. **Percentages of students with autism receiving additional resources over the period of compulsory education by location, 1999, 2001, 2003**



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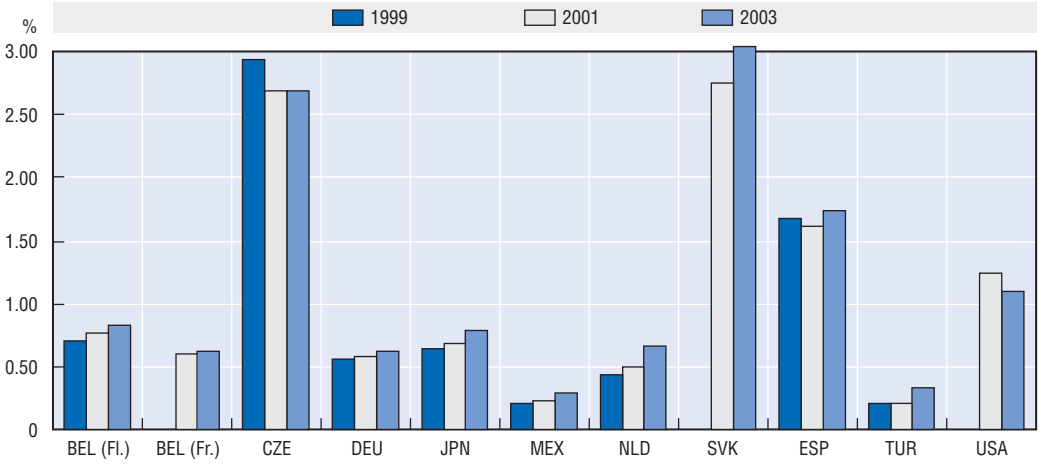
Notes: No national category in 1999 for the Czech Republic, Finland, Hungary and Turkey.

additional resources in this category in 2003 have been incorporated in special and, to a lesser extent, regular classes, although the number in special schools has also increased in absolute terms. The Slovak Republic is an exception, with a decrease in the proportion of students educated in regular and special classes in 2003 compared to 2001.

Severe and/or moderate learning difficulties

Figure 6.19 shows that several countries have registered a small increase in the number of students with severe and/or moderate learning difficulties in compulsory education over the years, although this is by no means universal (for example, in the Czech Republic and the United States there has been a drop).

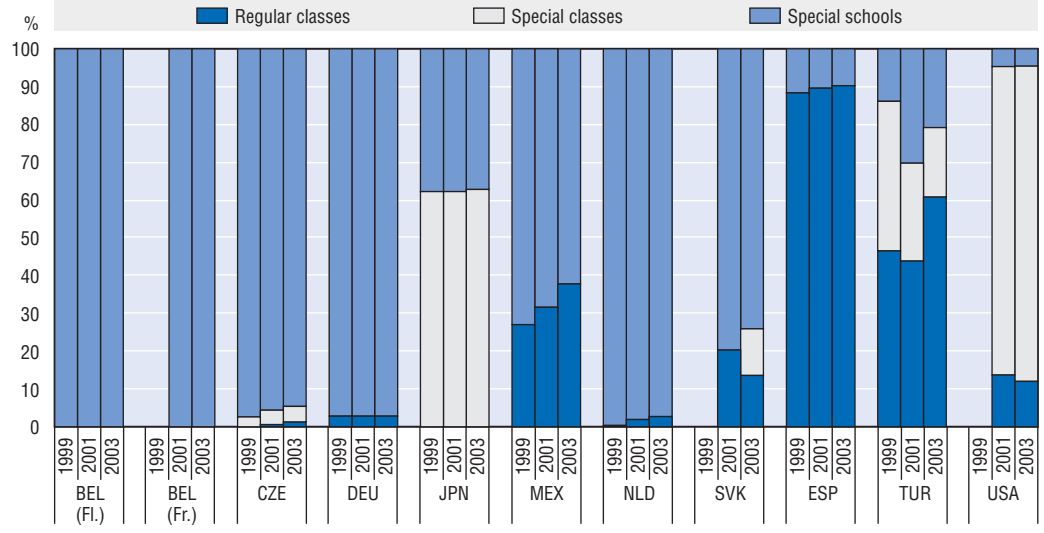
Figure 6.19. **Numbers of students with severe and/or moderate learning difficulties receiving additional resources over the period of compulsory education as a percentage of all students in compulsory education, 1999, 2001 and 2003**



StatLink http://dx.doi.org/10.1787/108212705787

In those countries where there has been a change in the percentage of students with moderate and/or severe learning difficulties over the four-year period in terms of location, it has mostly been again in the direction of fewer students being educated in special schools and more in special or regular classes, as can be seen in Figure 6.20. The Slovak Republic introduced special classes for students with moderate and/or severe learning difficulties in 2003.

Figure 6.20. **Percentages of students with severe and/or moderate learning difficulties receiving additional resources over the period of compulsory education by location, 1999, 2001, 2003**



StatLink http://dx.doi.org/10.1787/108235824241

Combinatorial disabilities

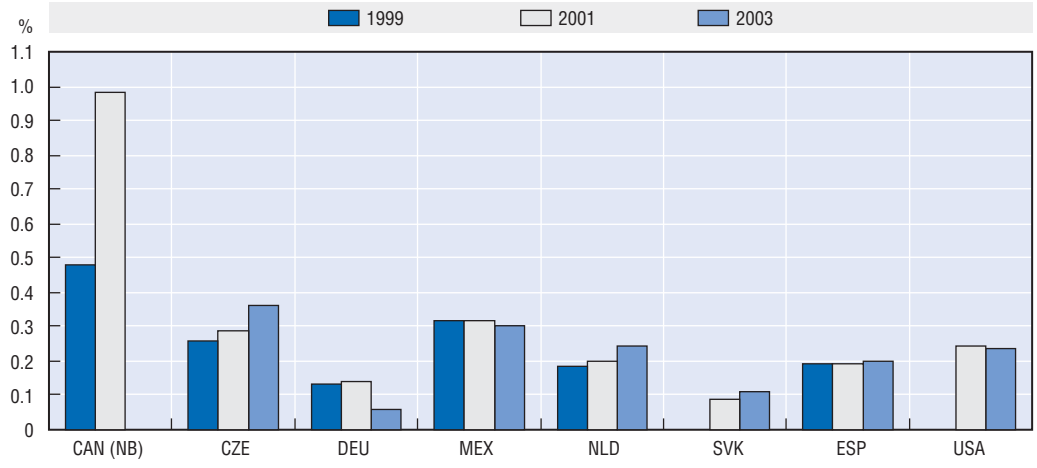
Figure 6.21 shows that in most countries where data are available, there appear to be no major changes over the four-year period in the percentage of students with combinatorial disabilities in compulsory education receiving additional resources. The only exceptions are the Czech Republic and Canada (New Brunswick), where there seems to have been an upward trend in the numbers of those students over the years from 1999 to 2003 and 1999 to 2001 respectively. This is despite the fact that these two countries report an overall decrease in CNC A.[4]

As can be seen in Figure 6.22, Germany has reported significant changes in terms of location in the percentage of students with combinatorial disabilities in compulsory education between 1999 and 2003, with an increase in the proportion of those students being in special schools in 2003 compared to previous years. An inspection of the data shows that the number of those students educated in special schools during this period has increased only slightly, and this change is mostly due to a large decline in the numbers of those students in regular classes. In the rest of the countries where similar data are available, there was little change between 1999 and 2003.

CNC B

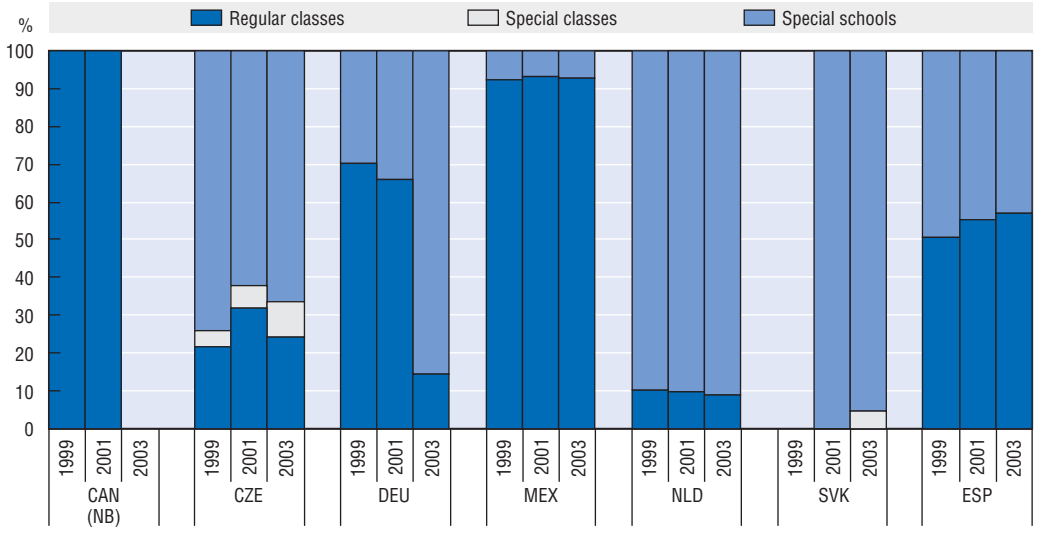
Most countries present little change over time in terms of percentages of students with learning difficulties in compulsory education (Figure 6.23). Canada (New Brunswick) is

Figure 6.21. **Numbers of students with combinatorial disabilities receiving additional resources over the period of compulsory education as a percentage of all students in compulsory education, 1999, 2001 and 2003**



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Figure 6.22. **Percentages of students with combinatorial disabilities receiving additional resources over the period of compulsory education by location, 1999, 2001, 2003**



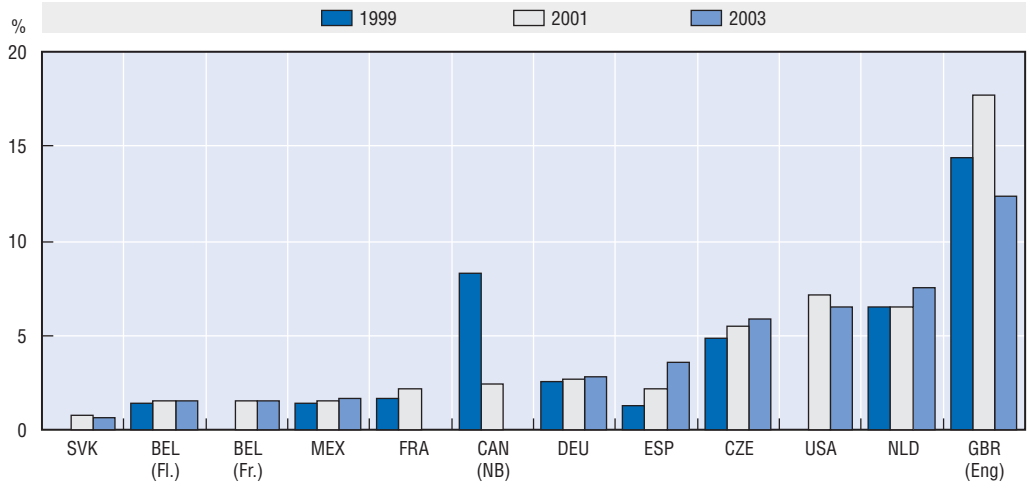
StatLink http://dx.doi.org/10.1787/108271817668

Note: Data for special classes in Germany and Spain are included in special schools.

an exception, with a substantial drop in percentages from 1999 to 2001. The United Kingdom (England) also reports considerable changes.

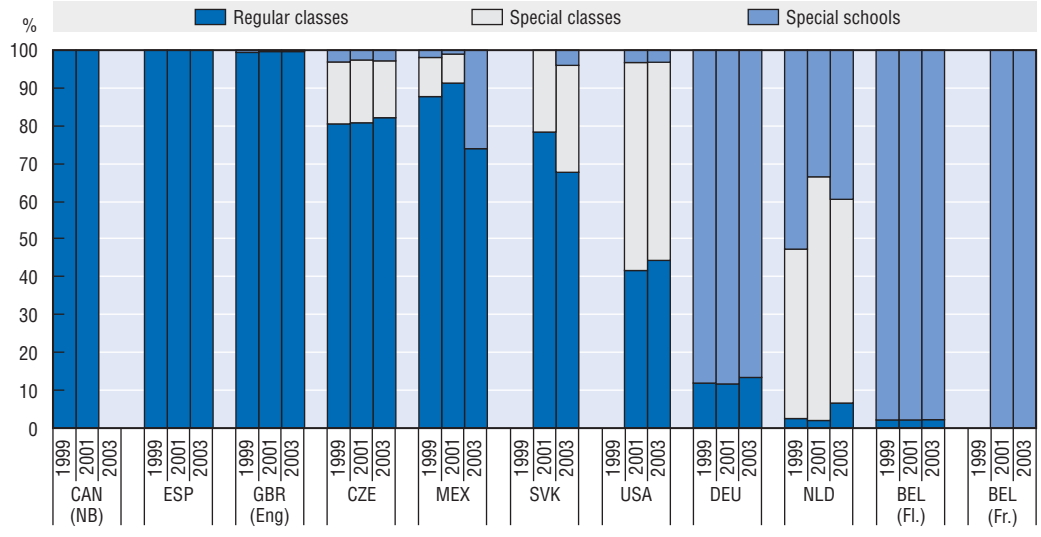
Figure 6.24 shows that in many countries there has been little change over time in the percentage of students within CNC B educated in different settings in compulsory education. In the Slovak Republic, there has been a decrease in the number (and proportion) of students in this category educated in regular classes and a (smaller) increase in the number (and proportion) of those educated in special classes. In addition, there have been more students in CNC B in special schools in 2003 (in 2001 the number was negligible). In Mexico,

Figure 6.23. **Numbers of students in cross-national category B receiving additional resources over the period of compulsory education as a percentage of all students in compulsory education, 1999, 2001 and 2003**



StatLink http://dx.doi.org/10.1787/108284353355

Figure 6.24. **Percentages of students receiving additional resources over the period of compulsory education in cross-national category B by location, 1999, 2001, 2003**



StatLink http://dx.doi.org/10.1787/108315877505

Notes:
Data for special classes in United Kingdom (England) are included in regular classes.
Data for special schools in the Slovak Republic in 2001 are negligible.
Data for special classes in Germany are included in special schools.

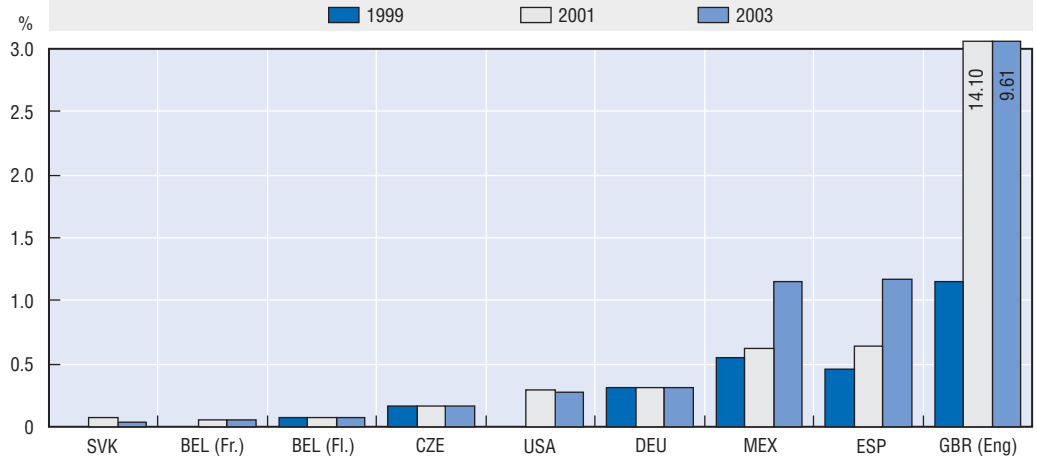
there has been a substantial increase in the number of those students in special schools in 2003, while at the same time special classes ceased being applicable. It appears that the students previously educated in special classes were placed in special schools in 2003, while at the same time a good number of students previously in regular classes were also placed in special schools.

In the Netherlands, the picture is rather more complex. From 1999 to 2001, the overall number of students in CNC B stayed more or less the same, but there appears to have been a shift of a considerable number of those students from special schools to special classes. From 2001 to 2003, there was a moderate increase in the overall number of those students with the additional students this time being incorporated in special schools and regular classes rather than special classes. According to officials from the Ministry of Education, Culture and Science in the Netherlands, this change is most probably due to new legislation that came into force in 1998. In that year, primary and secondary school students with learning difficulties and minor behaviour problems (*i.e.* those falling in CNC B) were transferred from special to mainstream education. As a result, some independent special schools (mostly secondary ones) were closed and their students were transferred to either special classes in mainstream (regular) schools or regular classes with extra support. This therefore reflected in the rise in the proportion of students in special classes in 2001. The rise in the proportion of students in special schools and regular classes in 2003 is possibly due to an increase in the number of students attending primarily vocational training in special schools on one hand and the fact that even more special schools for students with learning disabilities closed and their students were incorporated in regular classes of mainstream schools.

Figure 6.25 shows that in most countries the proportions of students in CNC B receiving additional resources in pre-primary education have stayed relatively stable over the four-year period, with small increases in the case of Mexico and Spain. The United Kingdom (England) is an exception, with a very large increase from 1999 to 2001 followed by a drop in 2003. According to officials of the Department for Education and Skills (DfES) in the United Kingdom, a possible explanation for this increase in 2001 is the introduction that year of a new SEN Code of Practice, while the subsequent drop may be due to relevant authorities trying to constrain the numbers of children identified as having special needs given the earlier increases.

In terms of the location of students in CNC B in pre-primary education presented in Figure 6.26, the Czech Republic and the Slovak Republic have shown a trend of including more of these students in special and regular classes respectively. In Mexico, there has

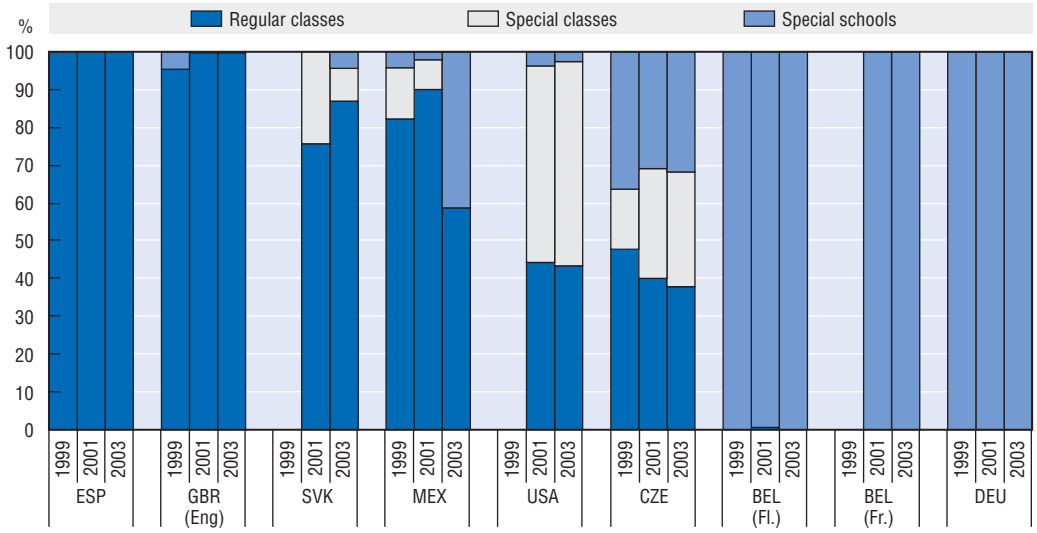
Figure 6.25. **Numbers of children in cross-national category B receiving additional resources over the period of pre-primary education as a percentage of all students in pre-primary education, 1999, 2001 and 2003**



StatLink http://dx.doi.org/10.1787/108321226837

Note: Data for regular classes in Belgium (French Community) are not available.

Figure 6.26. **Percentages of children receiving additional resources over the period of pre-primary education in cross-national category B by location, 1999, 2001, 2003**



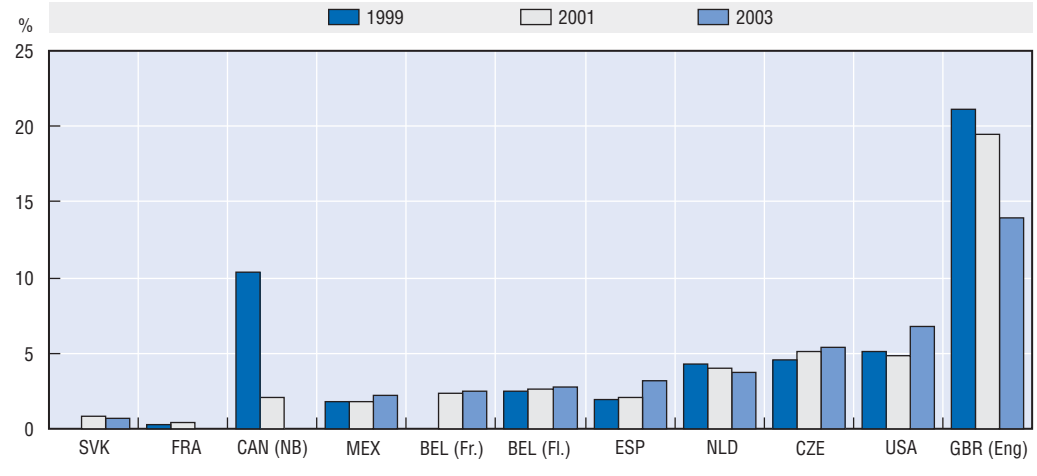
StatLink http://dx.doi.org/10.1787/108322427374

Notes:
Data for special classes in United Kingdom (England) are included in regular classes.
Data for special schools in the Slovak Republic in 2001 are negligible.
Data for special classes in Germany are included in special schools.
Data are not available in the United States for 1999.

been an increase in the number of students in special schools, similar to the one presented above in the case of compulsory education (see Figures 6.23 and 6.24).

In most countries, there is a small increase in the percentage of students with learning difficulties receiving additional resources at primary education level. Two exceptions are Canada (New Brunswick) and the United Kingdom (England) which present a trend in the

Figure 6.27. **Numbers of students in cross-national category B receiving additional resources over the period of primary education as a percentage of all students in primary education, 1999, 2001 and 2003**



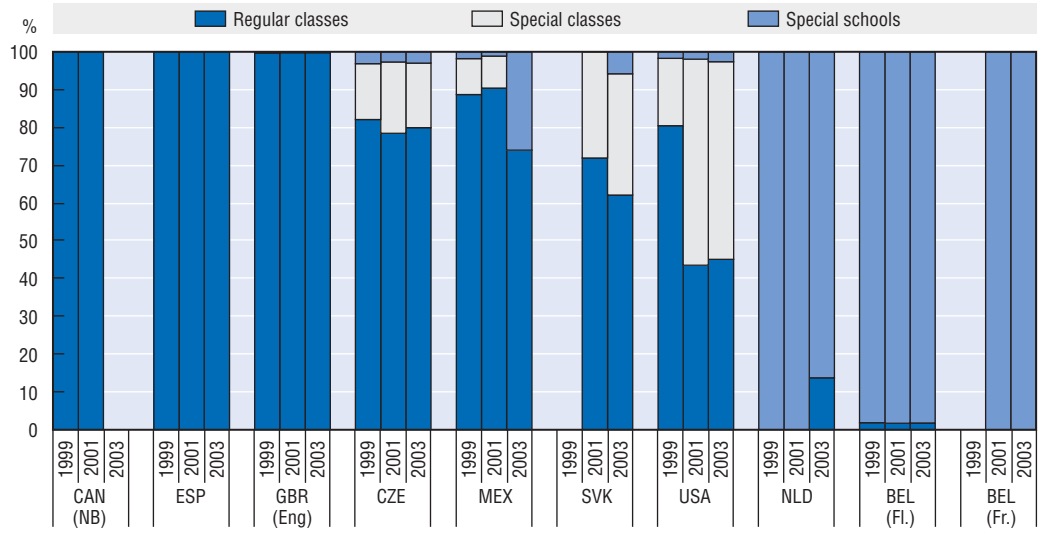
StatLink http://dx.doi.org/10.1787/108413701261

Note: Data for regular classes in Belgium (French Community) are not available.

opposite direction. This further contrasts with the upward trend for similar students in pre-primary education that was seen earlier in the case of the United Kingdom (see Figure 6.25 above). It is not clear what the causes for this decrease are.

Figure 6.28 shows that Mexico and the United States are the only countries to present considerable changes in the location where students in CNC B at primary level are educated. The former shows an increase in the proportion of those students in special schools, the latter in the proportion in special classes. Examining this trend in relation to the absolute numbers of those students reported in Figure 6.27, it can be seen that in the case of Mexico, there has not been a considerable increase in these students over the three years. It appears therefore that more of these students were placed in special schools in 2003 rather than in regular classes, while the number of those educated in special classes remained quite stable. In the United States, on the other hand, there was an increase in the percentage of primary school students in CNC B in 2003 compared to previous years but there was a shift of a considerable number of students from 1999 to 2001 from regular classes to special classes, with the numbers in special schools remaining relatively stable. This is most likely due to the change in methodology described in relation to the data presented in Chart 6.7 above.

Figure 6.28. **Percentages of students receiving additional resources over the period of primary education in cross-national category B by location, 1999, 2001, 2003**

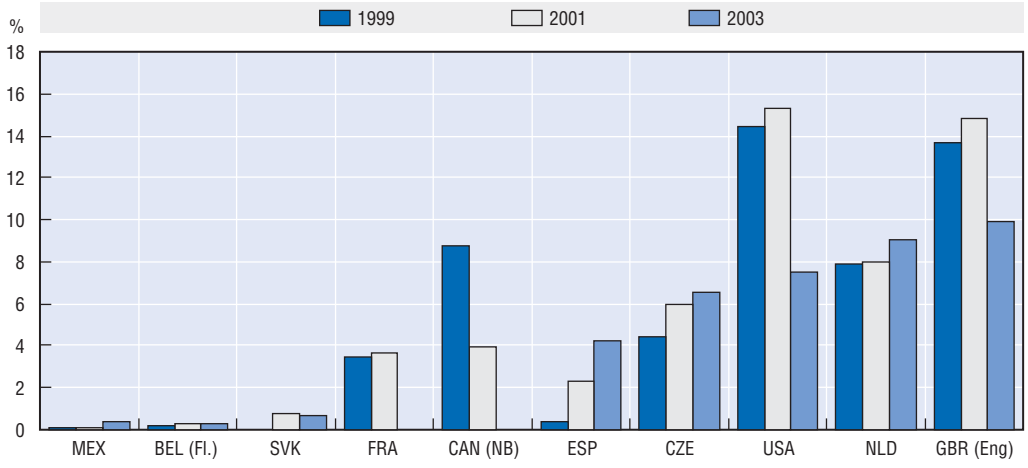


StatLink http://dx.doi.org/10.1787//107235681371

Notes:
Data for special classes in the United Kingdom (England) are included in regular classes.
Data for special schools in the Slovak Republic in 2001 are negligible.

As can be seen in Figure 6.29, the picture for trends in lower secondary education is rather mixed, with some countries registering increasing trends in the percentage of students in CNC B at this level receiving additional resources over the three year period (Belgium [Flemish Community], the Czech Republic, Spain) with others showing an increase from 1999 to 2001 followed by a decrease in 2003 (the United Kingdom [England] and the United States). These last two countries also report the highest numbers of students in this category and level as well as large changes over the years. As discussed earlier, a change in the way students of different ages are assigned to different educational

Figure 6.29. **Numbers of students in cross-national category B receiving additional resources over the period of lower secondary education as a percentage of all students in lower secondary education, 1999, 2001 and 2003**

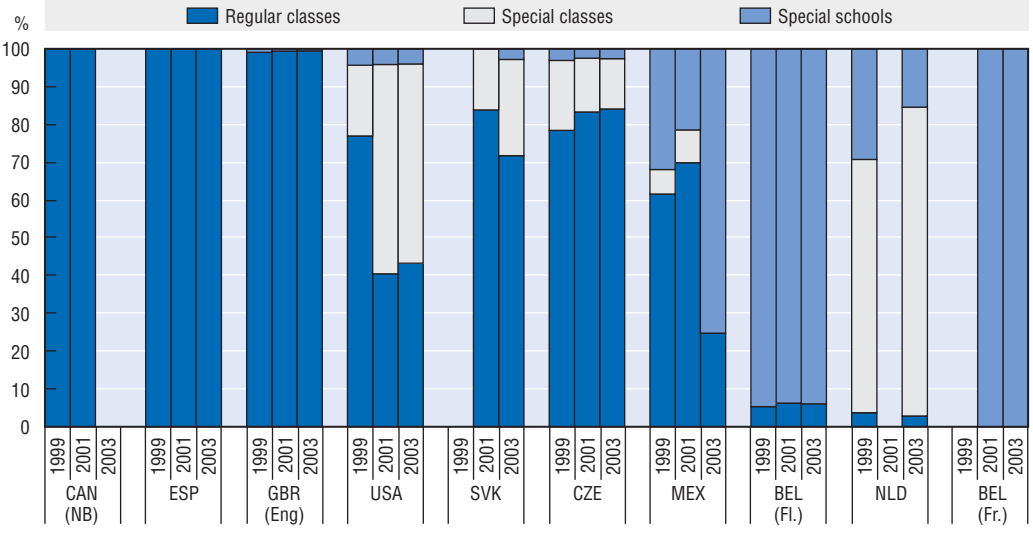


StatLink http://dx.doi.org/10.1787/108501767228

levels has meant that on the whole there has been a decrease in the number of students reported at lower secondary level in the United States. A possible explanation for the trend in the United Kingdom (England) is given in the section on pre-primary education above.

Figure 6.30 shows that Mexico and the United States are the two countries that report large changes over the years in the proportions of lower secondary students in CNC B educated in different locations. In terms of absolute numbers, students in this category and level in the United States decreased almost by half in special schools in 2003, while

Figure 6.30. **Percentages of students receiving additional resources over the period of lower secondary education in cross-national category B by location, 1999, 2001, 2003**



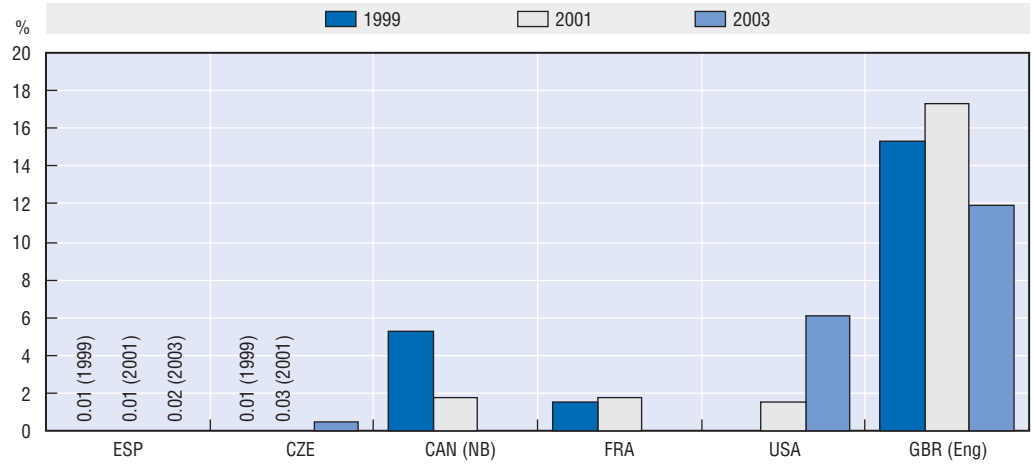
StatLink http://dx.doi.org/10.1787/108535880548

Notes:
Data for special classes in the United Kingdom (England) are included in regular classes.
Data for special schools in the Slovak Republic in 2001 are negligible.

there was a gradual decrease in numbers in 2001 and 2003 in regular classes. In special classes, numbers increased in 2001 followed by a decrease in 2003. The increase in the number and proportion of students in CNC B educated in special classes is similar to that observed for students in primary education in Chart 6.28 above and most likely due to the same change in methodology discussed extensively earlier. With regard to Mexico, there has been an increase in the overall number of these students in lower secondary education discussed earlier, and it appears that the majority of these additional students are educated in special schools.

Relatively few countries have provided data for this level of education in CNC B for more than one year, but it seems that there are large changes in most of them: In the United States, the proportion of these students increased dramatically in 2003 compared to previous years, whereas in the United Kingdom (England), an increase in 2001 was followed by a decrease in 2003 that brought the overall percentage to levels lower than in 1999; this trend is similar to the ones observed in the case of pre-primary and lower secondary education above. As discussed earlier, in the United States this increase is due to a change in methodology, as more children with disabilities are reported in upper secondary rather than lower secondary level (see comments on Figure 6.7).

Figure 6.31. **Numbers of students in cross-national category B receiving additional resources over the period of upper secondary education as a percentage of all students in upper secondary education, 1999, 2001 and 2003**



StatLink http://dx.doi.org/10.1787/108603458051

Note: Data for regular classes in the Czech Republic in 1999 are not available.

Finally, data on location of upper secondary level students in CNC B for more than one year are available in five countries only, presented in Figure 6.32. There are very small changes in the proportions of students receiving additional resources in different settings over the years, with the exception of the United States.

The following paragraphs examine in more detail the data for two national categories that fall within CNC B, emotional and behavioural difficulties and specific learning difficulties.

Figure 6.32. **Percentages of students receiving additional resources over the period of upper secondary education in cross-national category B by location, 1999, 2001, 2003**



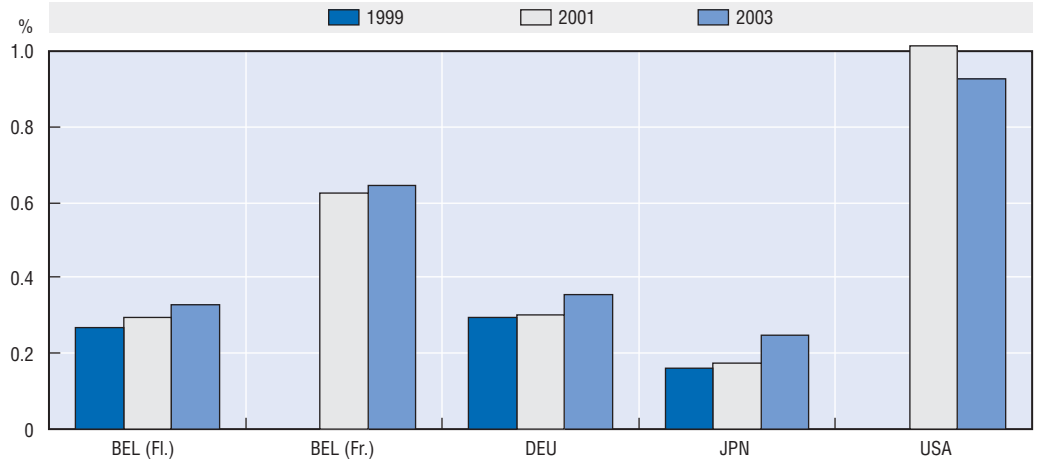
StatLink http://dx.doi.org/10.1787/108612270365

Notes:
Data for special classes in the United Kingdom (England) are included in regular classes.
Data for regular classes in Belgium (Flemish Community) are included in lower secondary.
Data for regular classes in the Czech Republic in 1999 are not available.

Emotional and behavioural difficulties

Figure 6.33 shows that the percentage of students with emotional and behavioural difficulties in compulsory education has been increasing slightly in all countries where trend data are available, with the exception of the United States, where there has been a small decrease.

Figure 6.33. **Numbers of students with emotional and behavioural difficulties receiving additional resources over the period of compulsory education as a percentage of all students in compulsory education, 1999, 2001 and 2003**



StatLink http://dx.doi.org/10.1787/108640761375

Figure 6.34 shows that in most countries there have been very small changes in the locations where students with emotional and behavioural difficulties in compulsory education are educated.

Figure 6.34. **Percentages of students with emotional and behavioural difficulties receiving additional resources over the period of compulsory education by location, 1999, 2001, 2003**



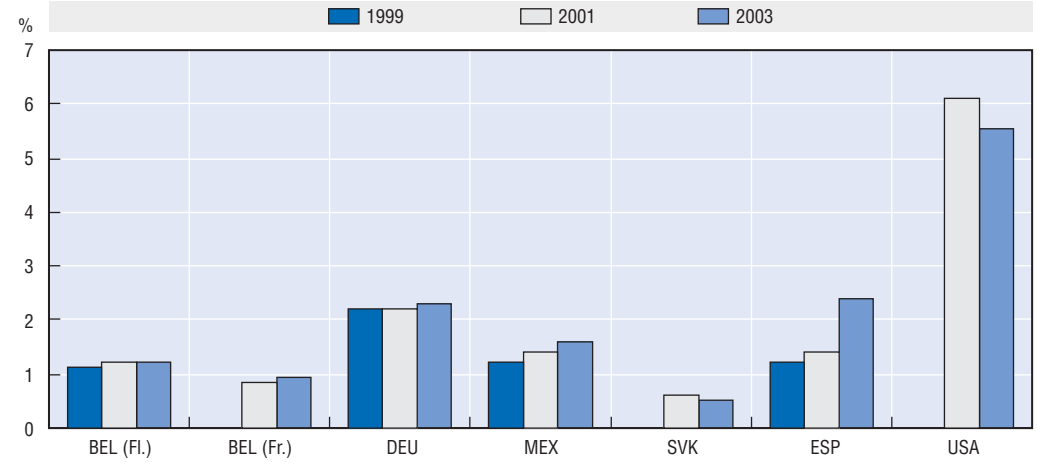
StatLink http://dx.doi.org/10.1787/108657500711

Notes: Data for special classes in Germany are included in special schools.

Specific learning difficulties

As can be seen in Figure 6.35, in most countries there are small changes in the percentage of students with specific learning difficulties receiving additional resources in compulsory education from 1999 to 2003, although in the majority the trend is of an

Figure 6.35. **Numbers of students with specific learning difficulties receiving additional resources over the period of compulsory education as a percentage of all students in compulsory education, 1999, 2001 and 2003**

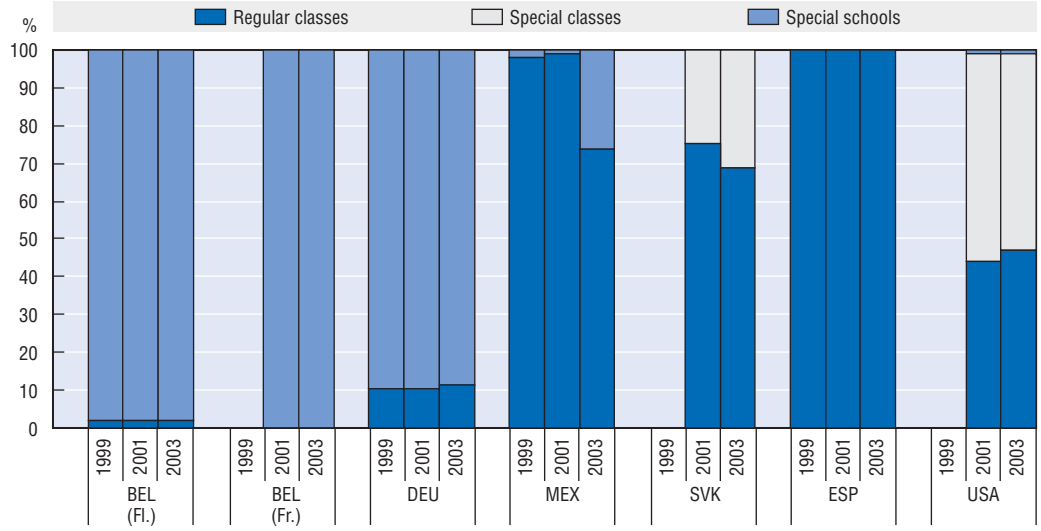


StatLink http://dx.doi.org/10.1787/108661783360

increase rather than a decrease, with the exception of the Slovak Republic and the United States that have reported lower percentages of those students in 2003 compared to 2001. In both of these countries, a similar trend was observed in the case of CNC B as a whole, as presented above in Figure 6.23 above.

Figure 6.36 shows that in most countries where data are available there seems to have been little change between 1999 and 2003 in the proportions of students with specific learning difficulties in compulsory education educated in different locations. Interestingly, Mexico has reported a rise in the percentage of those students educated in special schools as opposed to regular classes from around 5% in 1999 to nearly 30% in 2003. It appears therefore that effectively all of the additional students receiving additional resources for specific learning difficulties in 2003 were placed in special schools but that there was also a move of a considerable number of these students from regular classes to special schools in the same year.

Figure 6.36. **Percentages of students with specific learning difficulties receiving additional resources over the period of compulsory education by location, 1999, 2001, 2003**

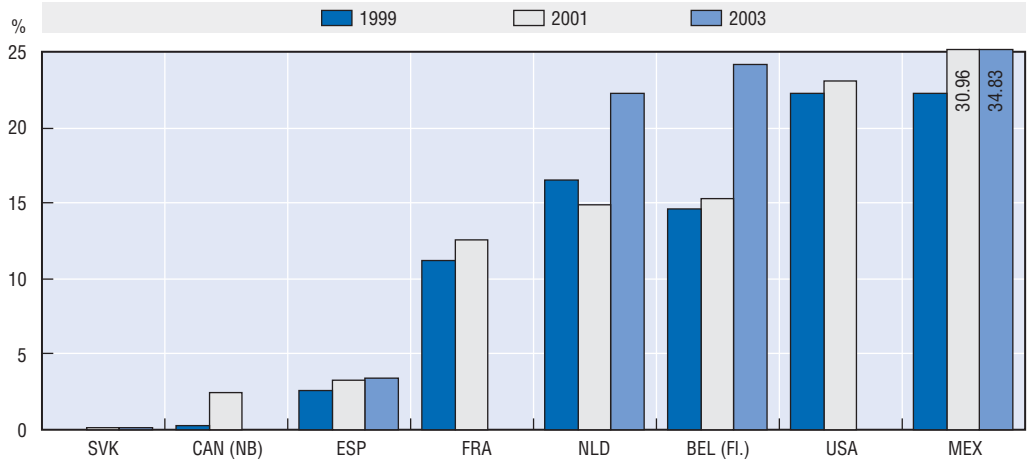


StatLink http://dx.doi.org/10.1787/108676514386

CNC C

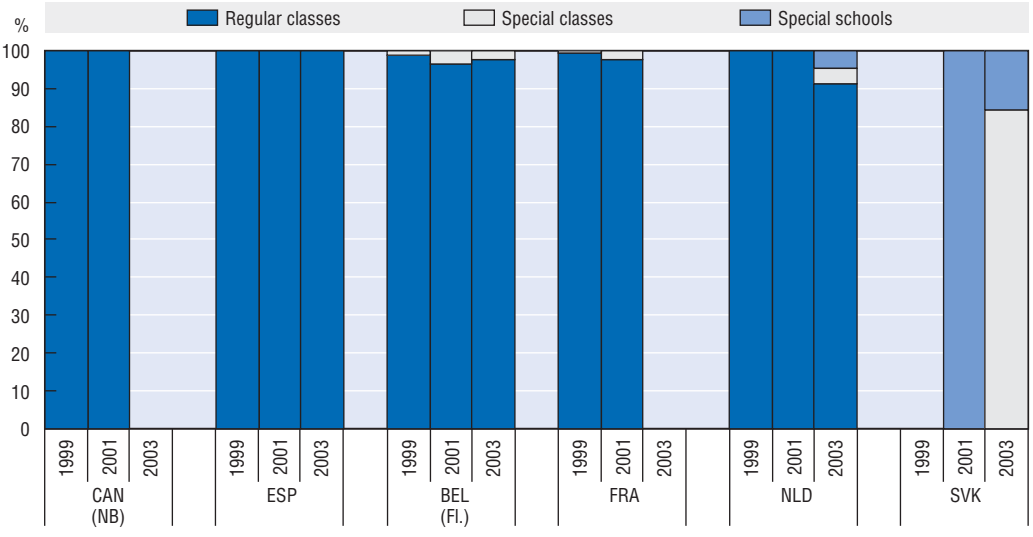
Fewer countries report data on students in compulsory education in CNC C, as can be seen in Figure 6.37; however, in those countries where data are available for two years or more, there has been an increase in the percentages of those students receiving additional resources in compulsory education. Wilcoxon's signed rank test for matched pairs showed that the difference between 1999 and 2003 percentages is statistically significant,[5] ($T = 0$, $p < 0.01$, $N = 8$). In some cases, this increase is quite substantial. For example in Belgium (Flemish Community) there was a rise from 14.24% in 1999 to 24.49% in 2003 and in Mexico from 21.28% in 1999 to 34.83% in 2003. In the case of Mexico, this increase is due to the inclusion in CNC C of larger numbers of indigenous students in 2003. In Belgium (Flemish Community), the national categories for CNC C were revised in 2003, which may explain the increase in the percentage of that year.

Figure 6.37. **Numbers of students in cross-national category C receiving additional resources over the period of compulsory education as a percentage of all students in compulsory education, 1999, 2001 and 2003**



StatLink http://dx.doi.org/10.1787/108705382825

Figure 6.38. **Percentages of students receiving additional resources over the period of compulsory education in cross-national category C by location, 1999, 2001, 2003**



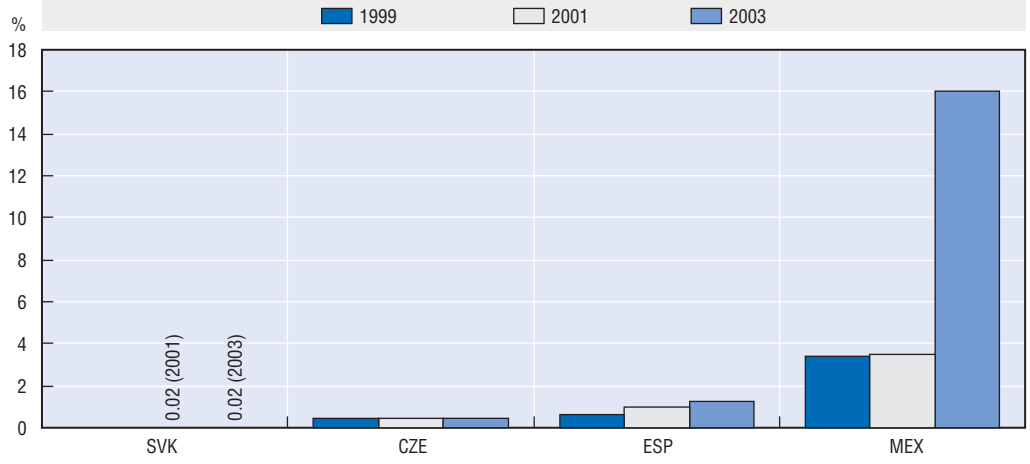
StatLink http://dx.doi.org/10.1787/108765550545

Notes: Data for regular classes and special classes in the Slovak Republic in 2001 are negligible.

The main point of interest illustrated in Figure 6.38 is the fact that the use of special classes rather than special schools has increased dramatically in the Slovak Republic from 2001 to 2003 for students in this category. According to officials at the National Institute of Education of the Slovak Republic this reflects the fact that a new category of "socially disadvantaged" children of primary age are educated in special classes in 2003. In the rest of the countries where trend data are available, there seems to have been little change over the four-year period.

Figure 6.39 shows that Mexico is the only country where there has been a considerable increase in the proportion of children at pre-primary level in CNC C from 3.39% in 1999 and 2001 to 16.01% in 2003. According to officials from the Ministry of Education in Mexico, this is because students with compensatory educational needs were enrolled for the first time in pre-primary schools in 2003.

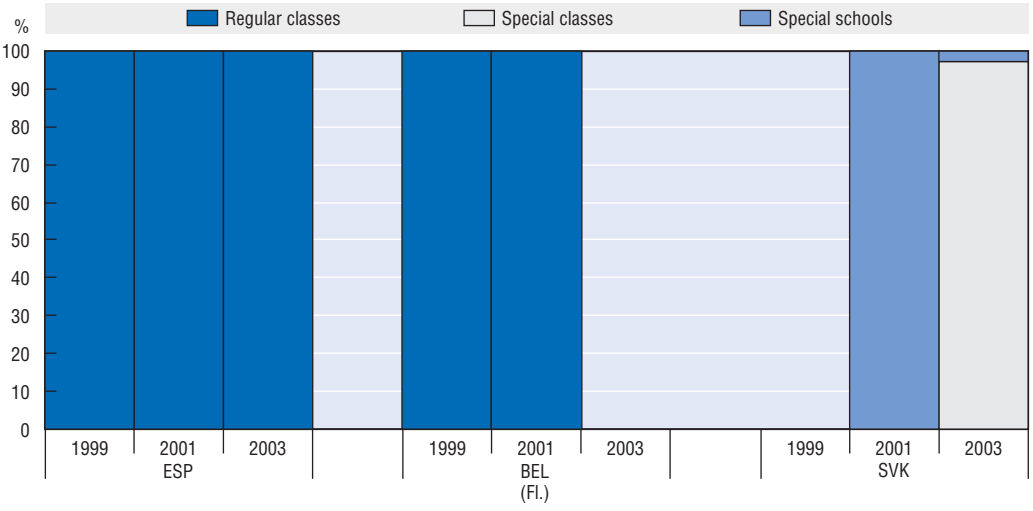
Figure 6.39. **Numbers of children in cross-national category C receiving additional resources over the period of pre-primary education as a percentage of all students in pre-primary education, 1999, 2001 and 2003**



StatLink http://dx.doi.org/10.1787/108821345130

Figure 6.40 shows that trend data on the location of students receiving additional resources in CNC C in pre-primary education are only available for three countries, Belgium (Flemish Community), the Slovak Republic and Spain. There have been no changes over the years in two of the three. But in the Slovak Republic, most of these students were in special classes in 2003, as opposed to special schools in 2001.

Figure 6.40. **Percentages of children receiving additional resources over the period of pre-primary education in cross-national category C by location, 1999, 2001, 2003**



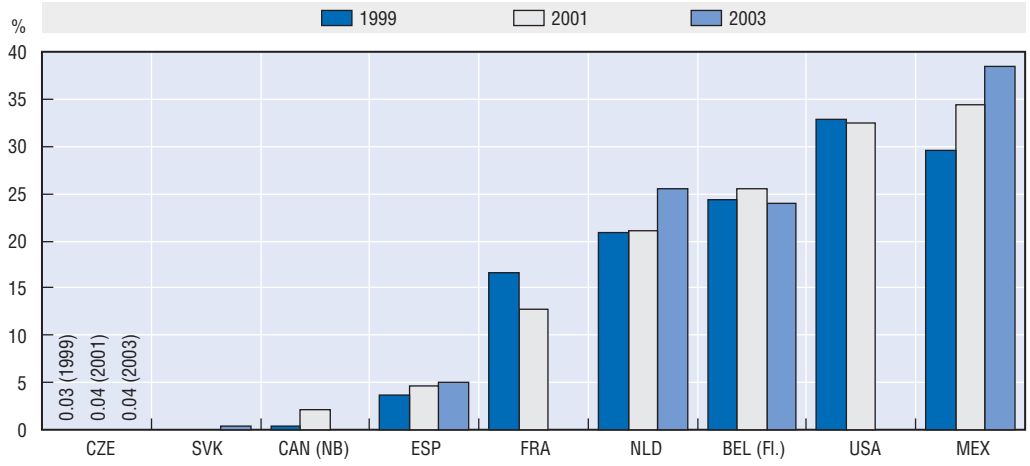
StatLink http://dx.doi.org/10.1787/108826511178

Notes: Data for regular classes and special classes in the Slovak Republic in 2001 are negligible.

Figure 6.41 shows that there is no overall trend for primary schools students in CNC C. About half the countries with available data – Canada (New Brunswick), the Netherlands, Mexico, Spain – have shown increases in the proportion of students in CNC C in primary education over the three years, while the other half – Belgium (Flemish Community), France, the Slovak Republic and the United States – showed small decreases (in the case of the former, the decrease in 2003 follows a small increase in 2001). Finally, in the Czech Republic the changes have been minimal.

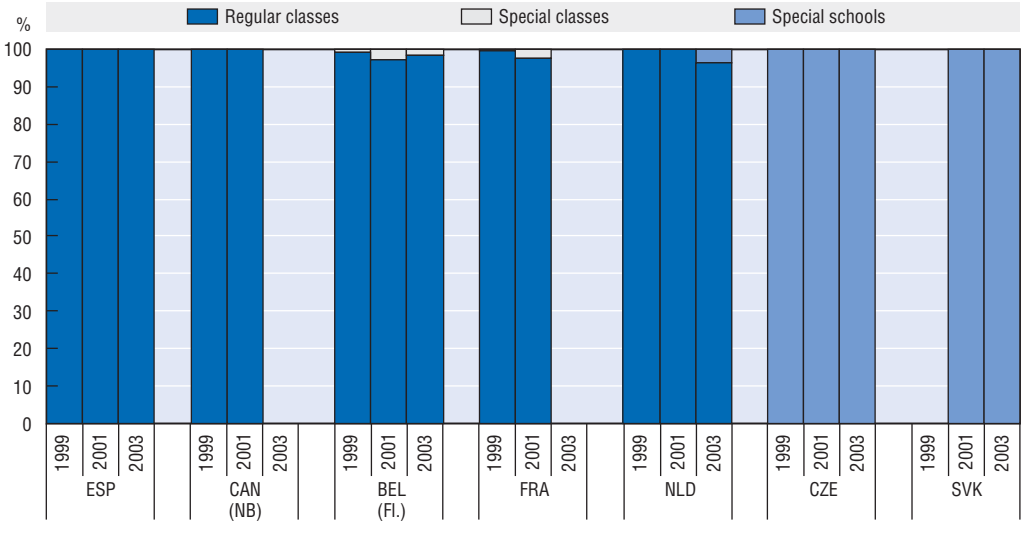
As was the case with pre-primary level students above, there has been little change over the years in the proportion of primary level children with disadvantages educated in different locations, with Belgium (Flemish Community), Canada (New Brunswick), Spain and the Netherlands educating 100% (or nearly) of those students in regular classes, while in the Czech Republic and the Slovak Republic, they are all located in special schools.

Figure 6.41. **Numbers of students in cross-national category C receiving additional resources over the period of primary education as a percentage of all students in primary education, 1999, 2001 and 2003**



StatLink http://dx.doi.org/10.1787/108826511178

Figure 6.42. **Percentages of students receiving additional resources over the period of primary education in cross-national category C by location, 2003**

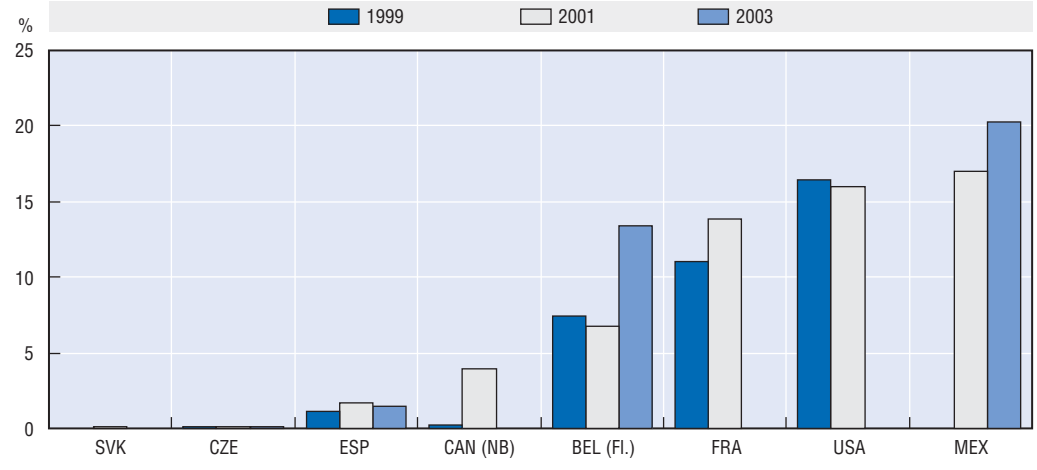


StatLink http://dx.doi.org/10.1787/108826511178

Notes: Data for regular classes and special classes in the Slovak Republic in 2001 are negligible.

Figure 6.43 shows that Belgium (Flemish Community) presents an increase in 2003 in the number of students in lower secondary education in CNC C receiving additional resources from 7.45% and 6.77% of all students in lower secondary education in 1999 and 2001 respectively to 13.42% in 2003. This is possibly as a result of the revision of national categories that took place in 2003.

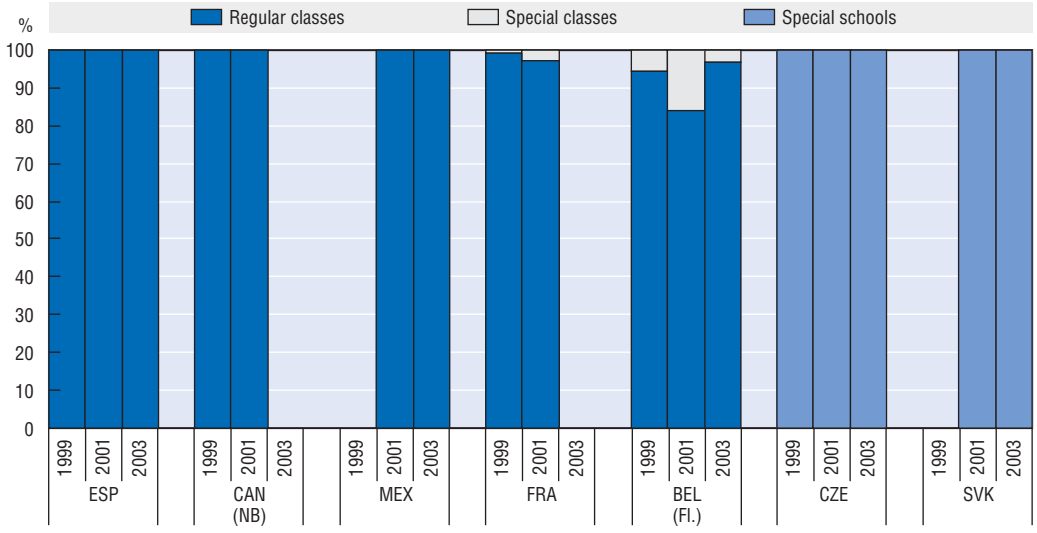
Figure 6.43. **Numbers of students in cross-national category C receiving additional resources over the period of lower secondary education as a percentage of all students in lower secondary education, 1999, 2001 and 2003**



StatLink http://dx.doi.org/10.1787/108838705288

As was the case with primary and pre-primary education (see above), Figure 6.44 shows that there have been very small changes over the years in terms of the proportion of lower-secondary in CNC C educated in different locations. In Spain and Mexico, all these

Figure 6.44. **Percentages of students receiving additional resources over the period of lower secondary education in cross-national category C by location, 1999, 2001, 2003**



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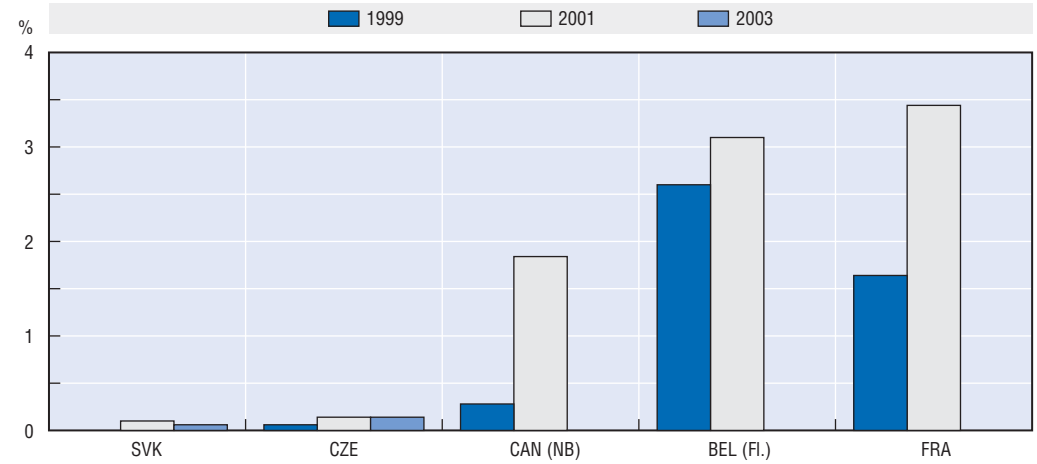
Notes: Notes:
Data for Mexico in 1999 are not available.
Data for regular classes and special classes in the Slovak Republic in 2001 are negligible.

students are educated in regular classes; whereas in the Czech Republic and the Slovak Republic, they are all educated in special schools. In Belgium (Flemish Community), a small proportion is in special classes with the majority in regular classes; it also appears that the additional students in this category in 2003 (see Figure 6.43 above) have been incorporated in regular classes.

Trend data for upper secondary level students in CNC C are available in five countries and are presented in Figure 6.45. There appears to be an overall increasing pattern in the trends from 1999 to 2003.

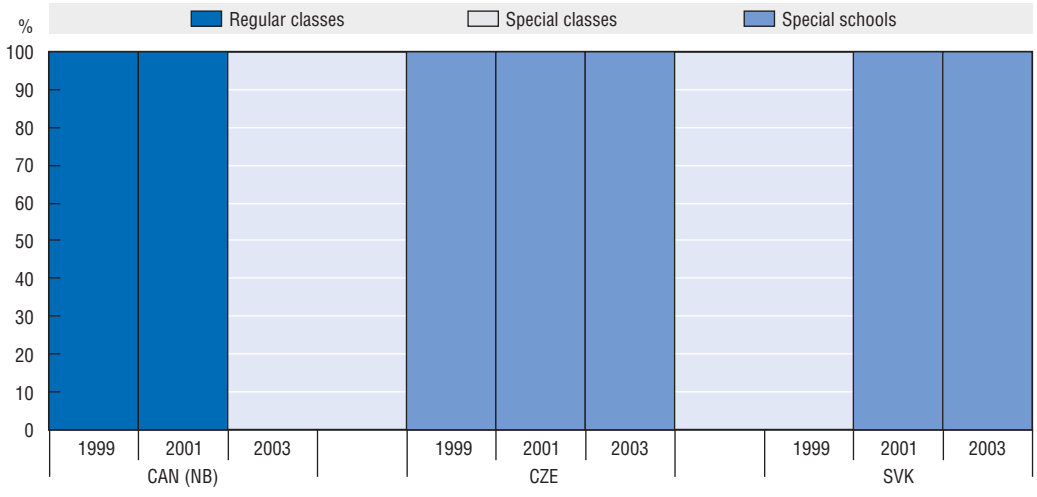
Figure 6.46 shows that there have been no changes in the location of upper-secondary level students in CNC C in any of the three countries where trend data are available.

Figure 6.45. **Numbers of students in cross-national category C receiving additional resources over the period of upper secondary education as a percentage of all students in upper secondary education, 1999, 2001 and 2003**



StatLink http://dx.doi.org/10.1787/108841881824

Figure 6.46. **Percentages of students receiving additional resources over the period of upper secondary education in cross-national category C by location, 1999, 2001, 2003**



StatLink http://dx.doi.org/10.1787/108854248206

Notes: Data for regular classes and special classes in the Slovak Republic in 2001 are negligible.

As very few countries have provided data on CNC C for all three years and given the fact the national categories falling within CNC C are too dissimilar to allow meaningful international comparisons trend data for individual national categories within CNC C are not presented here.

Trends in age data

This section presents data on the age distributions of students with disabilities, difficulties and disadvantages for the three time points of data collection, 1999, 2001 and 2003. Data in this section are presented for all three cross-national categories, A, B and C together, first for special schools and then for special and regular classes.

Figure 6.47a. **Numbers of students receiving additional resources in special schools as a proportion of all students by age, 1999, 2001, 2003**

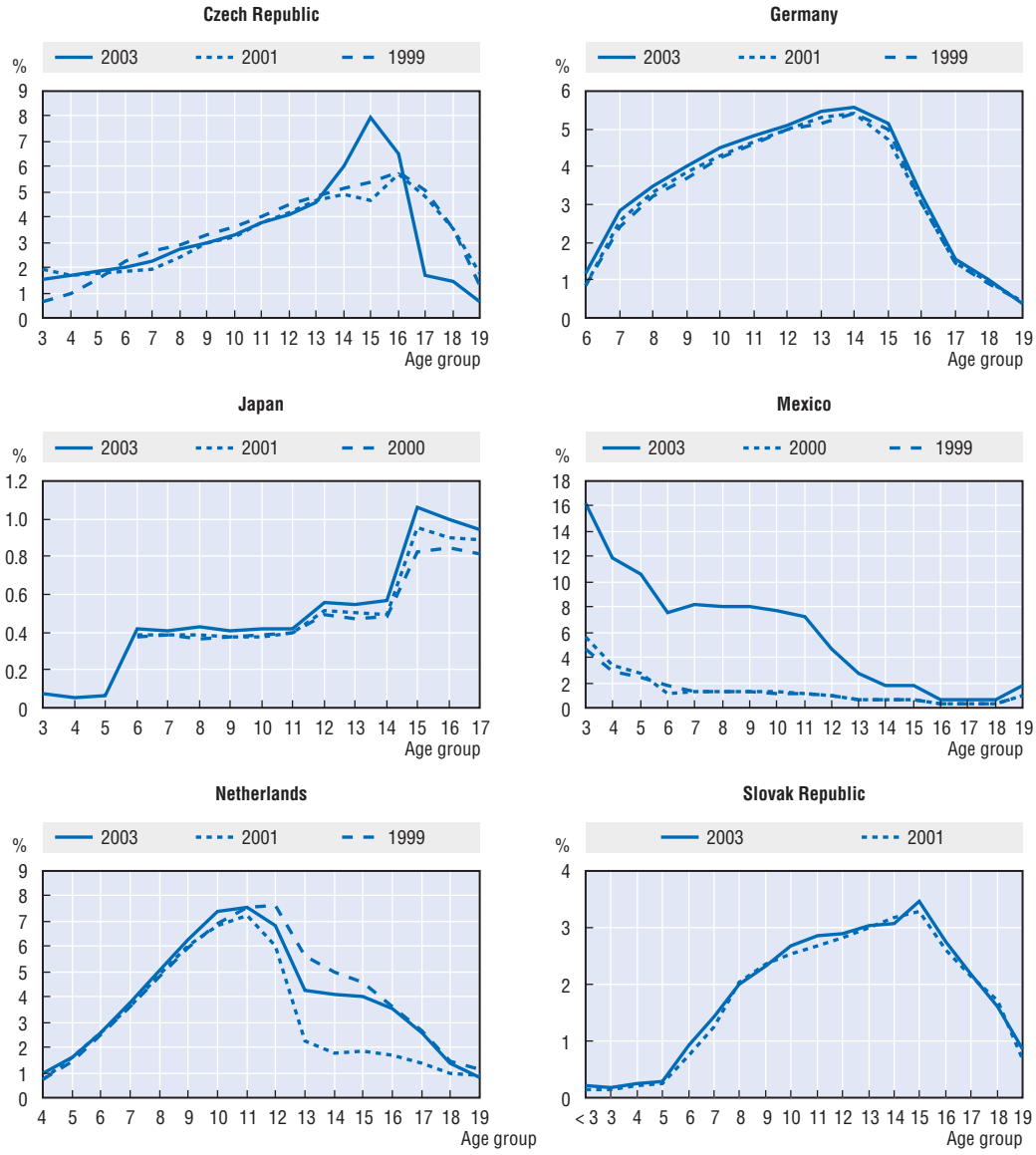
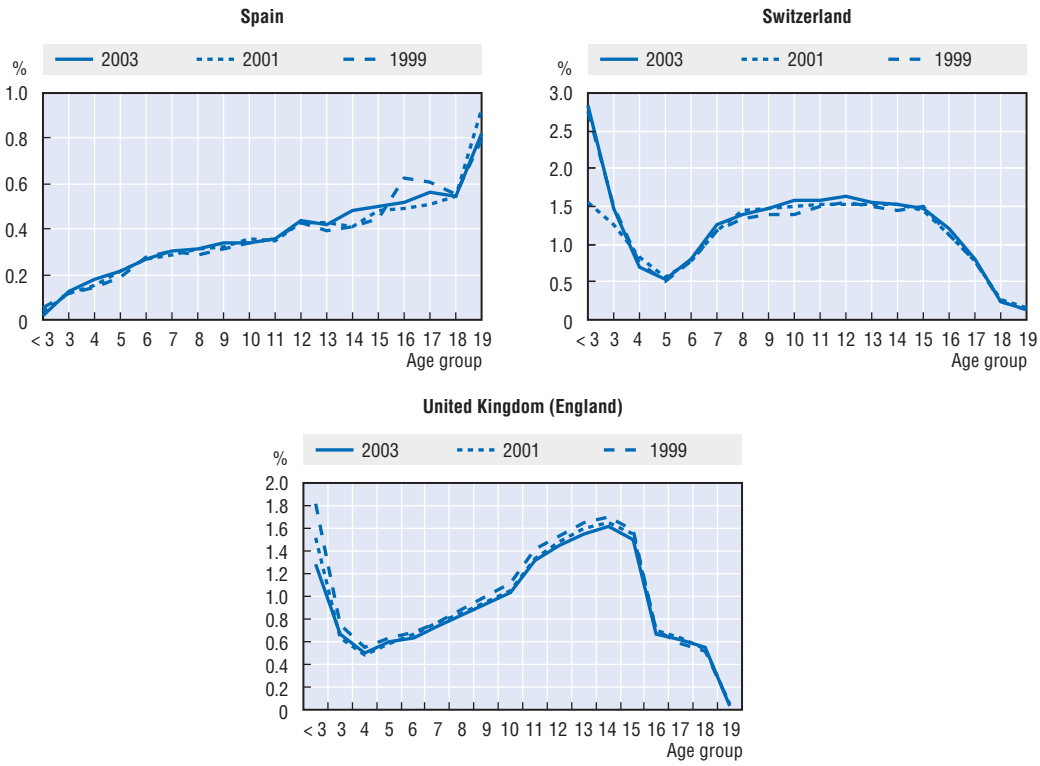


Figure 6.47b. **Numbers of students receiving additional resources in special schools as a proportion of all students by age, 1999, 2001, 2003**



StatLink http://dx.doi.org/10.1787/110033425044

Special schools

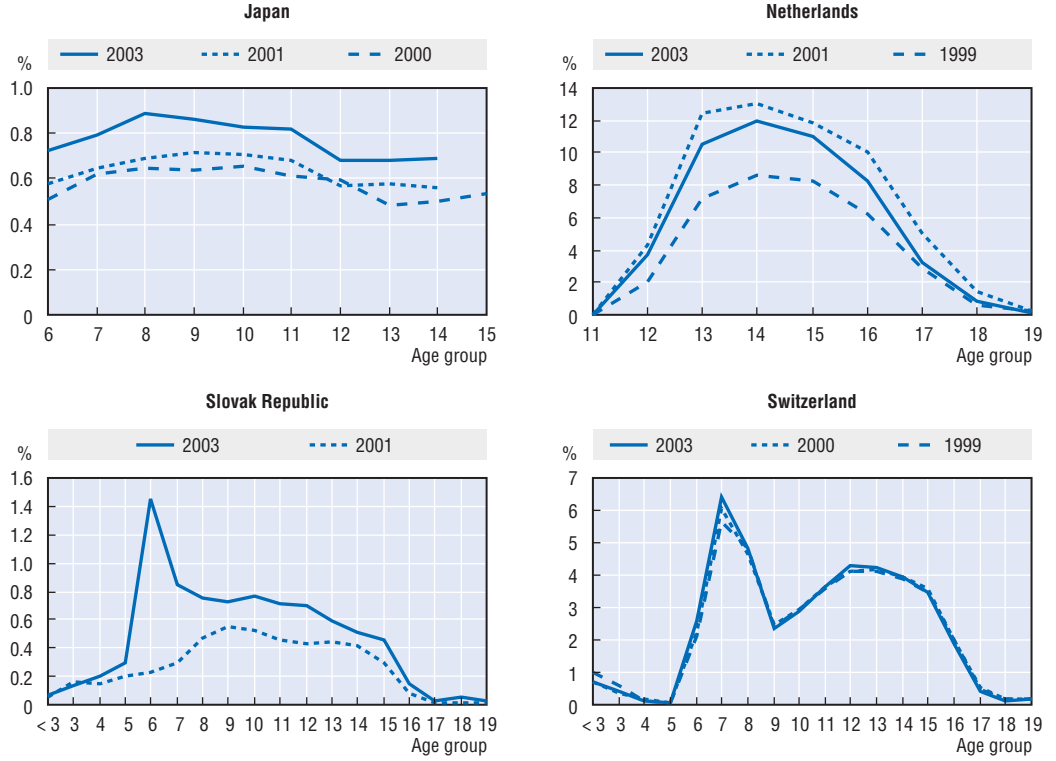
Differences over the years in the absolute numbers of children receiving additional resources have been discussed earlier in the chapter; in this chapter we are focusing on differences in terms of age distributions only, in other words we are concentrating on *differences* in the shapes of the distributions rather than the shapes of the distributions themselves.

Figure 6.47a presents age data on special schools for all cross-national categories, A, B and C. Most countries do not show substantial variations in the pattern of age distributions of children receiving additional resources in special schools over the four years 1999 – 2003. In a few cases, such as Germany and the United Kingdom (England), the three lines practically overlap, showing no change at all. Noticeable exceptions are the Czech Republic, Mexico, the Netherlands and Switzerland, which present some differences between 2003 and previous years. In the Czech Republic, there was an increase in the number of 14-16-year-olds receiving additional resources in special schools in 2003. In Mexico in 2000, there were large increases in numbers between the ages of 3 and 13, but much smaller increases in the older age groups. In the Netherlands, there was a rise in 2003 in the percentages of students in special schools between the ages of 13 and 17. Finally, in Switzerland there was an increase in the number of very young children (aged 3 and under) in 2003 compared to earlier years.

Special classes

As was the case with special schools, in most countries where data are available, there are no substantial differences in the age distributions of students in categories A, B and C

Figure 6.48. **Numbers of students receiving additional resources in special classes as a proportion of all students by age, 1999, 2001, 2003**



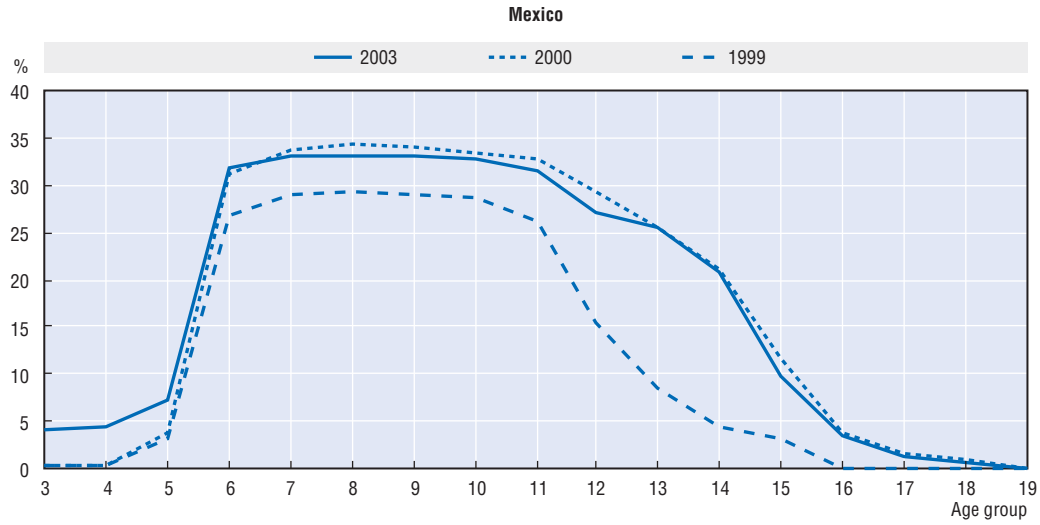
StatLink http://dx.doi.org/10.1787/110121655632

over the four-year period. The only exception is the Slovak Republic, where there has been a considerable increase in the percentage of these students of early primary school age in special classes in 2003 compared to 2001. According to officials from the National Institute of Education in the Slovak Republic, this is most probably because a new category, that of "students from socially disadvantaged backgrounds", was added in 2003 for children in preparatory classes aged 6-7.

Regular classes

Figure 6.48 shows the trend data for age distributions on students receiving additional resources in regular classes in the only country where these are available, Mexico. It appears that in 2000 and 2003 the percentage of these students increased in particular in the 6-15 age group.

Figure 6.49. **Numbers of students receiving additional resources in regular classes as a proportion of all students by age, 1999, 2000, 2003**



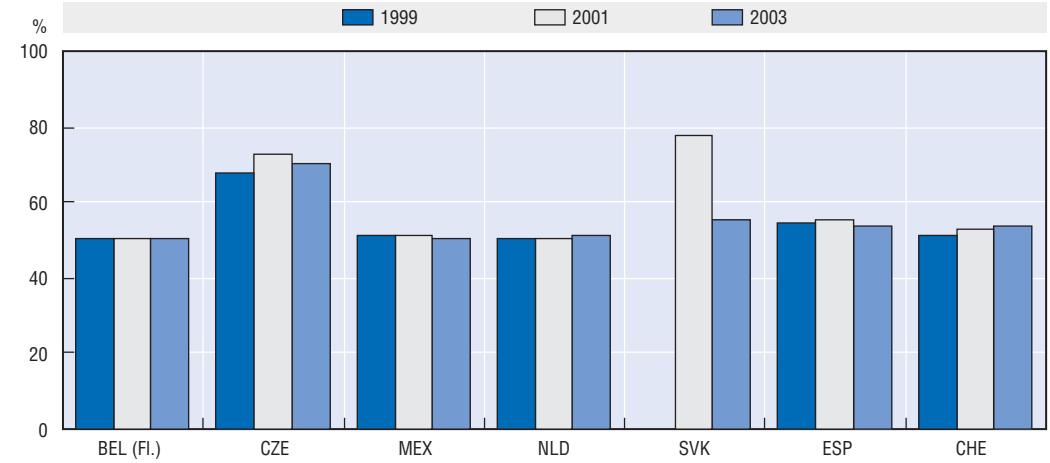
StatLink http://dx.doi.org/10.1787/110126540068

Trends in the gender data

As Figures 6.50 to 6.53 below show, data on gender have remained overall stable over the four year period in all cross-national categories and countries where data are available, with boys nearly always making up considerably more than 50% of students receiving additional resources in compulsory education. These data, as well as replicating the findings on gender differences presented earlier in the monograph (see Chapter 5 and 8), suggest that the differences between boys and girls are not diminishing over the years

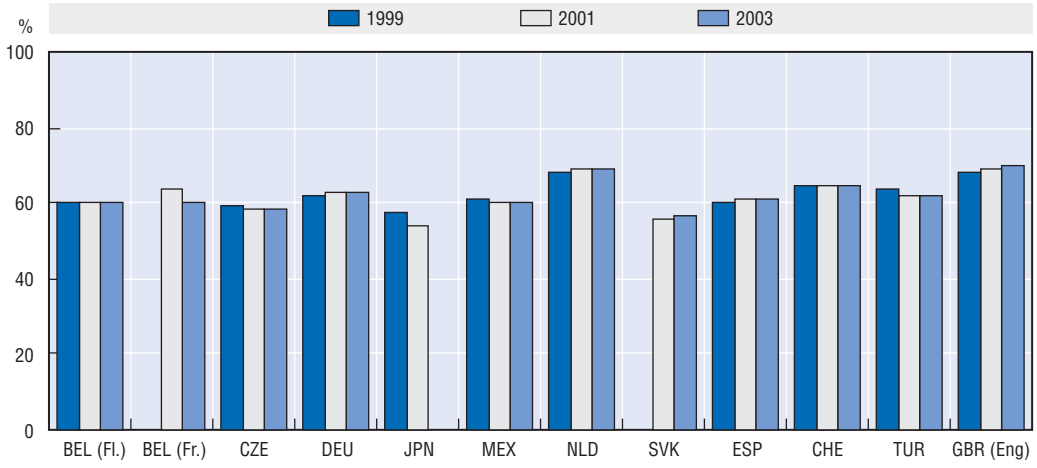
One exception is the Slovak Republic, which reports a drop in the percentage of boys receiving additional resources in CNC C from roughly 78% in 2001 to roughly 55% in 2001 (see Figure 6.52). A closer examination of the data shows that the main change in 2003 was the addition of the category "socially disadvantaged children" to CNC C, with the boy/girl ratio in this category much closer to 50:50 (499 boys and 471 girls educated in special classes).

Figure 6.50. **Percentages of boys over the period of compulsory education in all cross-national categories, 1999, 2001, 2003**



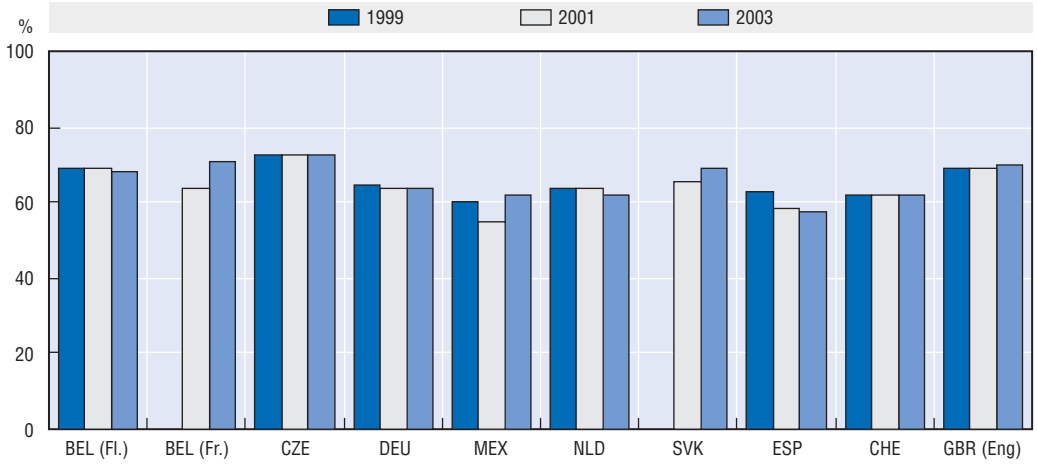
StatLink http://dx.doi.org/10.1787/110130237878

Figure 6.51. **Percentages of boys over the period of compulsory education in cross-national category A, 1999, 2001, 2003**



StatLink http://dx.doi.org/10.1787/110165208601

Figure 6.52. **Percentages of boys over the period of compulsory education in cross-national category B, 1999, 2001, 2003**



StatLink http://dx.doi.org/10.1787/110176270312

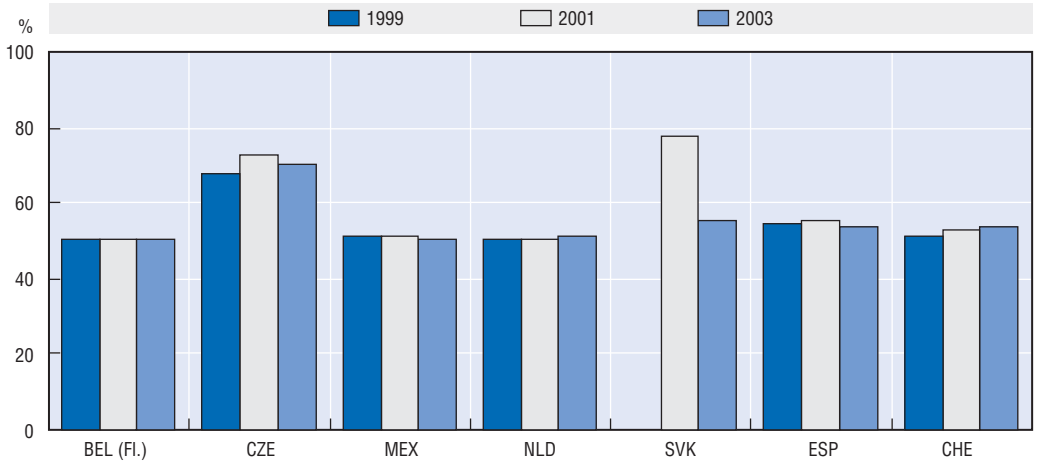
Summary

This chapter presented data on the numbers of students with disabilities, difficulties and disadvantages receiving additional resources for the three years available; 1999, 2001 and 2003. Despite considerable gaps in the data series, the overall picture emerging seems to suggest that support for those students has on the whole increased in OECD countries over this period, although there are of course considerable variations between countries.

Briefly the overall trends could be summarised as follows:

- In many countries there has been an overall increase in the numbers of students receiving additional resources in many individual national categories, *e.g.* physical disabilities, autism, emotional/behavioural disturbances.
- In many but by no means all countries, there has been an overall increase in the proportions of students educated in regular classes rather than special schools or special classes.

Figure 6.53. **Percentages of boys over the period of compulsory education in cross-national cateogry C, 1991,2001, 2003**



StatLink http://dx.doi.org/10.1787/110211373210

- There appear to be no or very small changes over the years in the age distributions of students receiving additional resources in all three cross-national categories over the years. That is, even in countries where there have been substantial changes over the years in terms of percentages of students receiving additional resources, the spread of these resources over the different age groups does not appear to have changed significantly overall.
- The gender differences observed throughout the study, namely the fact that substantially more boys than girls receive additional resources in virtually all categories and countries, seem to remain stable over the four-year period examined.

Notes

1. Two data points were used for the significance test, that of 1999 and 2003. When either of the two was missing it was replaced by the value for 2001.
2. Explanation offered by employees at WESTAT working under contract for the Department of Education, Office of Special Education Programs, United States.
3. These two countries have been included exceptionally in this chart – despite the non-availability of trend data – in order to illustrate further the apparent rising importance of autism in national policies.
4. In the case of Canada (New Brunswick), we cannot provide comparative data on any other national categories within CNC-A, as they are not comparable to those of other countries. However, it is possible that at least part of the differences in percentages between 1999 and 2001 are due to a re-allocation of certain students from one category to another.
5. As in the data presented in Chart 6.1 (above), the test compared data for 1999 and 2003. In cases where either of these two data points was missing, they were replaced by those for 2001.

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Chapter 7

The Participation of Students with Disabilities, Difficulties and Disadvantages in Standardised Assessments: The Case of PISA 2003

Introduction

This chapter presents a study that begins to address the issue of the participation of students with disabilities, difficulties and disadvantages (DDD) in standardised testing. Specifically, it describes the participation of these students in the OECD Programme for International Student Assessment (PISA) 2003, addressing participation by country and student demography. Performance is examined related to typical students, learner behaviours, and social background. Implications for broad-based participation, accommodation, and reporting are discussed.

International and national legislation, policies, and advocacy initiatives demand equity and social inclusion for students with disabilities, difficulties and disadvantages in all aspects of school reforms, programmes, and services. Standards-based reform demands that education systems set high academic content standards for all children and that they develop assessment and accountability systems to ensure that all children learn to very high levels. The expectation is that education systems will implement inclusive teaching and assessment programmes, assuring that all students, including students with disabilities, difficulties and disadvantages, have the opportunity to participate in high quality teaching and learning activities that will lead to valued social and vocational outcomes.

However, while the physical and academic inclusion of students with DDD in general education schools and classrooms has steadily increased across the world in the past two decades, their corresponding inclusion in standardised assessment and accountability systems has not proceeded at the same pace. According to the National Center for Education Outcomes (NCEO) of the United States, numerous issues have contributed to the slow integration of these students into assessment systems, including concerns about participation options, test accommodations, alternate assessment formats, reporting results, and accountability (Johnstone, 2003). At the international level, the educational programme of OECD has similarly been concerned with public accountability of education and the comparative functioning of education systems across the world, for all students. In fact, the potential intersection of the parallel missions of OECD/CERI, which examines education systems and outcomes for students with DDD, and OECD/PISA, which examines education systems and outcomes for secondary level students, has been evolving over the past several years. However, the systemic concerns about assessment that plague national initiatives are equally valid at the international level. Related to the concern of participation, questions exist with regard to the inclusion of students with DDD. Related to the concern of test accommodations, questions exist with regard to policies on accommodations, standardisation of accommodations, and types of accommodations for specific tests and items. Finally, with regard to reporting results, questions exist related to the inclusion of test results for students with DDD in national and international data.

Background

Overview of the Programme for International Student Assessment (PISA)

PISA is a large scale, multinational OECD programme which is designed to develop internationally comparable indicators that inform the process of education policy, reinforce the public accountability of education, and provide insight into the comparative functioning of education systems (OECD, 2004b). PISA provides outcomes on basic, contextual, and trend indicators. It is different from most educational assessments because it examines young people's capacity to use their knowledge and skills in order to meet real life challenges, rather than merely looking for mastery of school curricula. The assessment uses multiple-choice and open-ended questions to assess academic knowledge and skills in the areas of reading, mathematics, science, problem-solving, and computer technology. In addition, information is gathered on the students' attitudes and approaches to learning, and student and school demographic backgrounds. New to the student demographic background in PISA 2003 was a distinct variable identifying the student's special education status.

The PISA assessment is implemented every three years, with a sample of 15-year-old students from each participating country. The inaugural 2000 PISA focused on reading literacy, and gathered data from 265 000 students from 32 countries. The 2003 assessment, which examined mathematics proficiency, included 274 524 students from 41 countries. All OECD member countries participated in PISA 2003, as well as 11 partner countries.

The sampling strategy for identifying eligible schools and students has strict guidelines regarding exclusions. At the school level, 0.5% of the population may be excluded due to geographic inaccessibility, and another 2.0% may be excluded due to the segregated nature of their population, *e.g.* schools that only serve students who meet one of the three student exclusion criteria as stated below. Another 2.5% of the population may be excluded if the students are identified as having: a functional disability, an intellectual disability, or a limited proficiency in the test language. So overall, up to a total of 5% of the relevant population may be excluded either by excluding whole schools or students within schools.

PISA 2003 provides an optional test instrument for students with special education needs (Booklet UH [*une heure*]). This instrument is designed for use in schools where all students have special education needs or are all primary school students, such that the regular test booklet would be considered inappropriate. The UH booklet is composed of the PISA items deemed most suitable for students with special needs, and the test is designed to be only one hour in length, instead of the standard two hour assessment. The regular PISA booklet and the UH booklet cannot be mixed within the same school. Countries wishing to use the UH booklet must obtain prior approval and a separate test administration manual.

Purpose of the study

The aim of the study reported in this chapter was to examine the participation and performance of students with DDD in PISA 2003. The study describes the participation rates by countries, including OECD member countries and partner countries. Further, it describes the demographic characteristics of the students categorised in PISA as having special educational needs. Four such categories were recognised: functional disability, intellectual disability, limited test language proficiency, and other. Students' educational experiences and perceptions are presented as well as their perceptions of their learning

behaviours. A major intent of this study was to examine the performance of these students on mathematics, reading, and problem solving. This performance is compared to typical PISA participants for the three skill areas. The strength of the relationships between learner behaviours and mathematics performance, and the economic, social, and cultural status (ESCS) of students and mathematics performance for students with special educational needs is also explored. Furthermore, mathematics performance is examined in terms of the test format and type of disability.

Study questions

Specifically, this study addressed the following questions:

1. What is the PISA 2003 participation rate by country of students with disabilities, difficulties and disadvantages?
2. What are the demographic characteristics of the students with DDD who participated in PISA 2003?
3. What were the educational experiences and perceptions of school of the students with DDD who participated in PISA 2003?
4. How do students with DDD perform on PISA 2003 (mathematics, reading, problem solving)?
5. Are there differences in PISA 2003 performance by test booklet format?
6. How do students with DDD compare to typical PISA students on effective learner behaviours?
7. What is the relationship between effective learner behaviours and PISA mathematics performance for students with DDD?
8. What is the economic, social, and cultural status of students with DDD who participated in PISA 2003?
9. How do students with DDD compare to typical PISA students on economic, social and cultural status?
10. What is the relationship between the economic, social, and cultural status backgrounds of students with DDD and their PISA performance?

Methodology

Participants

The participants for this study were students with disabilities, difficulties and disadvantages who participated in PISA 2003. These students were identified through the Student Tracking Form under the code of SEN (special education needs). Within that code, students could be classified as one of five types: no special education needs (n = 272 398); functional disability (n = 311); intellectual disability (n = 1 815); limited test language proficiency (n = 900); and other (n = 741). Functional disability was defined as having a moderate to severe permanent physical disability. Intellectual disability was defined as having a mental or emotional disability and having been either tested as cognitively delayed or considered in the professional opinion of qualified staff to be cognitively delayed (OECD, 2004b). Limited test language proficiency was defined as not being a native speaker of the language of the test instrument in the country of test administration. The last category "other" was uniquely defined by each country PISA manager and approved by the international PISA centre. It is believed that the majority of the students in this

category were diagnosed with dyslexia. Only those students who could be classified in the above five categories, and who participated in the assessment, and for whom the following data exist: demographics; background information; performance in mathematics, reading and science; all student questionnaire variables, including motivation, interest in mathematics and approaches to learning; and all school questionnaire variables were included in the PISA database.

Variables

Three sources of data were used to complete this study: the student tracking form; the student questionnaire; and the student performance outcomes. The datasets were merged using a distinct linking variable across the sets. A description of these specific variables is presented with the findings to those study questions.

Limitations

The authors of this chapter acknowledge the following limitations:

- The definitions of categories of special educational needs are idiosyncratic to PISA 2003. In particular, they cannot be directly related to the OECD tri-partite cross-national model as described in Chapter 1 of this book.
- For some specific analyses, the sample sizes are very small and any inferential findings should be viewed with extreme caution.
- No attempt was made to link the school questionnaire data with the student data at this time.
- No attempt was made to examine student performance on mathematics scales or individual items; only overall performance is reported.
- No attempt was made to examine student performance by country, given the small overall size of the sample and the extremely small size of the sub-samples within each country.

Findings

The findings from this descriptive study are presented in terms of the study questions.

Question 1: What is the PISA 2003 participation rate by country of students with special educational needs?[1]

As shown in Table 7.1, PISA 2003 included 3 767 students with special educational needs, representing 1.37% of the total PISA population. By category, these students included 311 students with functional disabilities (0.11%), 1 815 students with intellectual disabilities (0.66%), 900 students with limited test language proficiency (0.33%), and 741 students labelled as "other" (0.27%). Of the 41 countries that participated in PISA 2003, 31 (75.6%) included at least one student with either functional or intellectual disabilities. Of the OECD member countries, 26 out of 30 (86.7%) included students with either functional or intellectual disabilities in their assessment. Only France, Japan, Korea, and Spain did not include any students with functional or intellectual disabilities in PISA. Of the PISA partner countries, five included these students (45.5%). Those five countries were Brazil, Hong Kong-China, Latvia, Thailand and Uruguay. The United Kingdom included the highest percentage of students with disabilities at 4.9% of their total participants. Belgium (2.9%), the United States (2.8%), Sweden (2.4%), the Netherlands (2.3%) and the Czech Republic (2.1%) represented the next largest groups. The remaining countries had less than 2% inclusion of students with disabilities in PISA.

Table 7.1. **SEN students by country**

	Total PISA Participants	% SEN	Functional disability		Intellectual disability		Limited language proficiency		Other	
			n	% category	n	% category	n	% category	n	% category
Australia	12 551	1.9	29	12.0	78	32.2	135	55.8	0	0.0
Austria	4 597	1.9	4	4.6	39	44.8	44	50.6	0	0.0
Belgium	8 796	3.5	12	3.9	239	76.8	60	19.3	0	0.0
Brazil	4 452	0.0	0	0.0	2	100.0	0	0.0	0	0.0
Canada	27 953	1.1	19	6.3	218	72.4	64	21.3	0	0.0
Czech Republic	6 320	2.3	9	6.2	126	86.3	1	0.7	10	6.8
Denmark	4 218	0.5	1	4.3	1	4.3	13	56.5	8	34.8
Finland	5 796	7.2	5	1.2	10	2.4	45	10.8	355	85.5
France	4 300	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Germany	4 660	2.5	1	0.9	2	1.7	5	4.3	108	93.1
Greece	4 627	0.0	1	100.0	0	0.0	0	0.0	0	0.0
Hong Kong (China)	4 478	0.0	2	100.0	0	0.0	0	0.0	0	0.0
Hungary	4 765	1.7	7	8.5	69	84.1	6	7.3	0	0.0
Iceland	3 350	1.5	27	52.9	20	39.2	4	7.8	0	0.0
Indonesia	10 761	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ireland	3 880	2.7	4	3.9	50	48.5	24	23.3	25	24.3
Italy	11 639	1.1	16	12.5	43	33.6	69	53.9	0	0.0
Japan	4 707	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Korea	5 444	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Latvia	4 627	0.0	0	0.0	1	100.0	0	0.0	0	0.0
Liechtenstein	332	2.7	0	0.0	0	0.0	9	100.0	0	0.0
Luxembourg	3 923	2.0	1	1.3	0	0.0	78	98.7	0	0.0
Macao (China)	1 250	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mexico	29 983	0.2	27	42.9	5	7.9	27	42.9	4	6.3
Netherlands	3 992	6.8	3	1.1	85	31.5	5	1.9	177	65.6
New Zealand	4 511	1.4	5	8.2	15	24.6	41	67.2	0	0.0
Norway	4 064	0.7	2	6.9	10	34.5	17	58.6	0	0.0
Poland	4 383	1.6	2	2.9	15	21.4	0	0.0	53	75.7
Portugal	4 608	1.4	8	12.5	44	68.8	12	18.8	0	0.0
Russian Federation	5 974	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Slovakia	7 346	1.2	22	24.2	68	74.7	1	1.1	0	0.0
Spain	10 791	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Sweden	4 624	4.1	10	5.3	99	52.1	81	42.6	0	0.0
Switzerland	8 420	1.4	10	8.2	26	21.3	85	69.7	1	0.8
Thailand	5 236	0.1	1	20.0	0	0.0	4	80.0	0	0.0
Tunisia	4 721	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Turkey	4 855	0.1	2	66.7	0	0.0	1	33.3	0	0.0
United Kingdom	9 535	5.1	67	13.7	399	81.8	22	4.5	0	0.0
United States	5 456	3.6	8	4.1	144	73.8	43	22.1	0	0.0
Uruguay	5 835	0.3	6	35.3	7	41.2	4	23.5	0	0.0
Yugoslavia	4 405	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	276 165		311		1 815		900		741	

StatLink http://dx.doi.org/10.1787/110216206487

Source: PISA 2003.

Twenty-seven countries (65.9%) included at least one student with limited test language proficiency. Australia, Sweden, Switzerland, and Luxembourg had more than 70 students in this category, while the remaining 23 countries had less than 60 students each.

Finally, 741 students from nine countries (22%) were included under the code of "other". The majority of these students came from Finland (47.9%), followed by 23.9% from the Netherlands, 14.6% from Germany, and 7.2% from Poland. The remaining countries using this code (with fewer than 25 students per country) included the Czech Republic, Denmark, Ireland, Mexico and Switzerland.

Question 2: What are the demographic characteristics of the students with special educational needs who participated in PISA 2003?

Table 7.2 presents the demographic characteristics of the students who participated in PISA 2003. Overall typical students were nearly evenly divided by gender, while there were substantially more males in the SEN sample.[2] While the majority of all students were in

Table 7.2. **Demographic characteristics of students in PISA 2003**

Characteristic	Not SEN		SEN	
	n	%	n	%
Disability				
Functional	n.a.	n.a.	311	8.3
Intellectual	n.a.	n.a.	1 815	48.2
Limited language proficiency	n.a.	n.a.	900	23.9
Other	n.a.	n.a.	741	19.7
Gender				
Male	134 253	49.4	2 305	61.4
Female	137 360	50.6	1 451	38.6
Current grade				
7th grade	3 536	1.3	84	2.2
8th grade	13 431	5.0	544	14.5
9th grade	86 227	31.8	1 647	44.0
10th grade	152 031	56.1	1 036	27.6
11th grade	14 005	5.2	367	9.8
12th grade	1 629	0.6	69	1.8
Living arrangement				
One parent/Guardian (and others)	51 659	20.3	799	26.4
Two parents/Guardians (and others)	202 419	79.7	2 228	73.6
Parent education – Mother				
None	14 331	5.5	161	5.5
ISCED 1/Primary	30 149	11.5	194	6.6
ISCED 2/Lower secondary	38 753	14.8	464	15.8
ISCED 3/Upper secondary	69 231	26.5	719	24.5
ISCED 4, 5, 6/Post-secondary, tertiary ed.	109 066	41.7	1 397	47.6
Parent education – Father				
None	11 226	4.4	150	5.5
ISCED 1/Primary	27 269	10.8	176	6.4
ISCED 2/Lower secondary	38 046	15.0	427	15.5
ISCED 3/Upper secondary	65 816	26.0	663	24.1
ISCED 4, 5, 6/Post-secondary, tertiary ed.	111 093	43.8	1 331	48.5
Highest parent occupational status				
White collar high skilled	129 233	49.1	1 286	42.4
White collar low skilled	57 152	21.7	738	24.4
Blue collar high skilled	38 971	14.8	480	15.8
Blue collar low skilled	37 958	14.4	526	17.4

StatLink http://dx.doi.org/10.1787/110222143848

Source: PISA 2003.

grades 9 or 10 (lower secondary), the students with special educational needs were more widely spread throughout the grade levels than the typical students. In terms of living arrangements, typical students were slightly more likely to live with both parents than SEN students. Parents' educational attainment was similar, though more SEN students reported that both their parents completed post-secondary schooling, as compared to typical students. Conversely, a higher percentage of parents of typical students were reported to have white collar, high skilled jobs than SEN parents.

Table 7.3 presents the demographic characteristics of the SEN students by SEN category. As previously indicated, the largest single group of students had intellectual disabilities, followed by students with limited test language proficiency, other, and functional disabilities, respectively. Nearly 60% of the participating students were male, thus replicating findings reported elsewhere in this monograph. The majority of the students were in grades 9 and 10, with a mean age of 15.8 years. The vast majority of the students reported that they live with both parents and siblings. Similar percentages

Table 7.3. **Demographic characteristics of SEN students in PISA 2003 – By type of disability**

Characteristic	Not SEN	Functional disability	Intellectual disability	Limited Language proficiency	Other (defined by National project managers; mostly dyslexic)
Gender	n = 271613	n = 310	n = 1806	n = 899	n = 741
Male	49.4	58.1	66.1	51.2	63.7
Female	50.6	41.9	33.9	48.8	36.3
Age (mean)	15.80	15.77	15.78	15.82	15.73
Current grade	n = 270859	n = 309	n = 1801	n = 896	n = 741
7th grade	1.3	1.6	2.1	2.7	2.3
8th grade	5.0	4.9	14.0	12.5	22.3
9th grade	31.8	27.2	38.3	39.3	70.3
10th grade	56.1	44.3	28.2	39.6	4.9
11th grade	5.2	18.4	14.3	5.6	0.3
12th grade	0.6	3.6	3.1	0.3	0.0
Living arrangement	n = 254078	n = 287	n = 1313	n = 818	n = 609
One parent/Guardian (and others)	20.3	25.8	29.4	26.7	19.9
Two parents/Guardians (and others)	79.7	74.2	70.6	73.3	80.1
Parent education – Mother	n = 261530	n = 272	n = 1251	n = 851	n = 561
None	5.5	5.9	4.4	8.7	2.9
ISCED 1/Primary	11.5	4.8	4.0	9.6	8.7
ISCED 2/Lower secondary	14.8	17.6	17.5	14.3	13.4
ISCED 3/Upper secondary	26.5	27.9	27.9	17.5	25.8
ISCED 4, 5, 6/Post-secondary, tertiary ed.	41.7	43.8	46.2	49.8	49.2
Parent education – Father	n = 253450	n = 255	n = 1153	n = 792	n = 547
None	4.4	3.5	4.9	7.7	4.4
ISCED 1/Primary	10.8	7.8	4.9	6.2	9.1
ISCED 2/Lower secondary	15.0	16.1	15.9	14.9	15.5
ISCED 3/Upper secondary	26.0	26.7	27.5	16.7	26.7
ISCED 4, 5, 6/Post-secondary, tertiary ed.	43.8	45.9	46.8	54.5	44.2
Highest parent occupational status	n = 263314	n = 288	n = 1327	n = 806	n = 609
White collar high skilled	49.1	50.7	37.9	47.1	42.2
White collar low skilled	21.7	24.0	27.0	17.7	27.6
Blue collar high skilled	14.8	12.8	15.8	16.0	17.1
Blue collar low skilled	14.4	12.5	19.3	19.1	13.1

StatLink http://dx.doi.org/10.1787/110242013615

Source: PISA 2003.

(44-55%) of their parents had post-secondary education (ISCED 4 and above). The majority of parents of students across the special educational needs categories were reported to have white collar, high skilled occupations. However, a smaller percentage of parents of students with intellectual disabilities had white collar, high skilled jobs compared to the other parents.

Question 3: What were the educational experiences and perceptions of school of the students with special educational needs who participated in PISA 2003?

Table 7.4 presents the educational experiences and expectations of the students with special educational needs by category. In terms of their pre-primary experience (ISCED 0), the majority of students did attend pre-primary programmes and the majority of them also attended those programmes for more than one year. Once students were in the primary (ISCED 1) programme, few of them repeated those levels, although they were more likely to repeat the level than typical students. As might be expected, students with intellectual disabilities and dyslexia ("other") were more likely to have repeated a level than their peers with functional disabilities or limited test language proficiency. Fewer students across all categories repeated lower secondary programmes, than primary programmes. Among the repeaters of lower secondary, students with intellectual disabilities were most likely to repeat than any other group of students. 3% or less of students, across all categories, reported that they had repeated the upper secondary programme. This response is consistent with the required age of 15 for the PISA assessment, in that the majority of students would just be entering upper secondary at the time of the assessment.

Table 7.5 presents the PISA participants' perceptions of school by student type. Approximately equal percentages of students, independent of type of special educational need, attended their local schools or schools that had specific or better programmes than

Table 7.4. **SEN student educational experience and expectations**

ISCED Level	Not SEN (n = 868173)		Functional disabilty (n = 954)		Intellectual disability (n = 4 250)		Limited language proficiency (n = 2 660)		Other (n = 1 729)	
	n	%	n	%	n	%	n	%	n	%
Pre-primary (0)										
Did not attend	31 489	11.8	32	10.9	155	11.4	224	26.3	53	8.5
Attended	64 740	24.3	76	25.9	492	36.2	219	25.7	143	23.1
Attended > 1 year	169 831	63.8	186	63.3	711	52.4	410	48.1	424	68.4
Primary (1)										
Have not repeated	225 784	91.6	242	87.7	922	74.5	649	83.6	440	72.8
Repeated	18 430	7.5	29	10.5	273	22.1	113	14.6	156	25.8
Repeated > Once	2 390	1.0	5	1.8	42	3.4	14	1.8	8	1.3
Lower secondary (2)										
Have not repeated	220 225	93.2	243	96.0	967	89.2	631	88.7	475	94.8
Repeated	14 789	6.3	9	3.6	102	9.4	75	10.5	26	5.2
Repeated > Once	1 250	0.5	1	0.4	15	1.4	5	0.7	0	0.0
Upper secondary (3)										
Have not repeated	116 019	97.3	127	96.9	554	97.0	309	96.6	4	97.3
Repeated	3 186	2.7	3	2.3	16	2.8	10	3.1	0	2.7
Repeated > Once	40	0.0	1	0.8	1	0.2	1	0.3	0	0.0
Total	868 173		954		4 250		2 660		1 729	

StatLink http://dx.doi.org/10.1787/110256326043

Source: PISA 2003.

Table 7.5. **SEN student perceptions of school**

By type of disability

Characteristic	Not SEN	Functional disabilty	Intellectual disability	Limited language proficiency	Other
Reasons for attending school	n = 272398	n = 289	n = 533	n = 852	n = 633
This is the local school for students who live in this area.	45.0	48.8	49.8	39.0	61.0
This school is known to be a better school than others in the area.	31.6	30.4	29.7	33.5	15.2
This school offers specific study programmes.	26.5	24.9	26.8	28.1	15.5
This school has a particular religious philosophy.	6.1	9.0	6.7	7.0	2.2
Previously, family members attended this school.	27.9	33.2	28.3	17.3	24.0
Other reasons.	35.7	31.8	32.2	39.8	28.0
Teachers – *Summary score*	2.17	2.10	2.15	2.10	2.24
Students get along well with most teachers.	2.20	2.14	2.24	2.17	2.27
Most teachers are interested in students' well-being.	2.21	2.12	2.13	2.07	2.34
Most of my teachers really listen to what I have to say.	2.27	2.21	2.25	2.19	2.35
If I need extra help, I will receive it from my teachers.	2.09	1.97	1.96	1.95	2.07
Most of my teachers treat me fairly	2.10	2.04	2.15	2.09	2.18
My school is a place where... – *Summary score*	1.83	1.92	1.96	2.03	1.88
I feel like an outsider (or left out of things).[1]	2.05	2.45	3.91	2.99	2.67
I make friends easily.	1.84	1.97	1.84	1.92	1.94
I feel like I belong.	1.98	2.06	2.11	2.11	2.08
I feel awkward and out of place.[1]	2.17	2.61	3.94	3.06	2.73
Other students seem to like me.	2.00	2.00	1.96	2.06	2.03
I feel lonely.[1]	2.01	2.50	3.77	2.86	2.58
In the last two weeks, how many times late for school: (n = 1 655)					
None	62.8	63.6	52.6	51.7	50.7
One or two times	25.6	25.4	26.3	29.6	29.5
Three or four times	6.5	6.2	11.2	9.6	9.4
Five or more times	5.0	4.8	9.9	9.0	10.4
Time spent each week (in hours):					
Homework or other study set by your teachers	6.23	6.52	3.87	6.09	3.41
< Remedial classes > at school	0.97	1.26	1.23	1.51	0.83
< Enrichment classes > at school	0.78	0.74	0.66	1.04	1.89
Work with a < tutor >	0.51	0.59	0.44	0.62	0.30
Attending < out-of-school > classes	0.89	0.40	0.46	0.73	0.46
Other study	1.65	1.77	1.19	1.64	0.77

StatLink http://dx.doi.org/10.1787/110273322833

1. Indicates reverse-coded items.

their local schools. All students with special educational needs expressed similar perceptions about their teachers. Overall, they perceived them as helpful and interested in their well-being. As a group, students with special educational needs were positive about the culture of their schools. However, students with intellectual disabilities and those with limited native language were more likely to indicate that they felt out of place or left out of things in their schools. Only students with functional disabilities had similar rates for tardiness as compared to typical students (~36%). The other students with special needs reported that they were tardy nearly 50% of the time, with one or more events over a two-week period being common. In terms of how students spend studying time, students with functional disabilities and students with limited native language reported that they spend more than six hours a week doing homework, while students with intellectual disabilities and students with dyslexia ("other") reported that they spend just under four hours per week on homework. They reported similar time spent on other academic and support tasks; each less than two hours for such activities

as remedial classes, and enrichment. The average time spent working with a tutor or attending out-of-school classes was less than one hour per week in all categories.

Question 4: How do students with special educational needs perform on PISA 2003 (mathematics, reading, and problem solving)?

The focus of PISA 2003 was mathematics literacy, which is defined as "the capacity to see how mathematics can be used in the real world and thus to engage in mathematics to meet one's needs" (OECD, 2004b). Each student is given a score based on the difficulty of tasks that he/she could reliably perform. The average student score is 500. Student performance scores are also divided into six proficiency levels, with level 6 being most proficient. Proficiency relates to a student's capacity to analyse, reason and communicate effectively when using mathematics. Brief summaries of typical student skills by proficiency level are described below.

Level 1: Students can answer questions involving familiar contexts where all relevant information is present and the questions are clearly defined.

Level 2: Students can interpret and recognise situations in contexts that require no more than direct inference.

Level 3: Students can execute clearly described procedures, including those that require sequential decisions.

Level 4: Students can work effectively with explicit models for complex concrete situations that may involve constraints or call for making assumptions.

Level 5: Students can develop and work with models for complex situations, identifying constraints and specifying assumptions.

Level 6: Students can conceptualise, generalise, and utilise information based on their investigations and modelling of complex problem situations.

While not being the focus of PISA 2003, students also completed test items in reading and problem solving, which were scored using the same proficiency scale as for mathematics.

Table 7.6 presents the mean performance scores for mathematics, reading, and problem solving by type of student. They include both those students taking the standard booklets and those taking a special booklet used by some students (see discussion on Question 5 below). On average, students with special educational needs scored fifty or more points below typical students in all test areas. Across all test areas, students with functional disabilities had the highest mean scores, while students with intellectual disabilities had the lowest mean scores. Students with limited test language proficiency and students categorised as "other" (primarily dyslexic) had very similar scores across all test areas.

Figures 7.1a-c depict the mean performance by proficiency level of students with special educational needs as compared to typical PISA 2003 participants on mathematics, reading and problem solving, respectively. As can be seen, the vast majority of students with special educational needs fell below the midpoint (level 3) on mathematics performance. The modal response was below level 1. This same pattern was true for students with special educational needs on reading performance. On problem solving performance, only 4% of the students with special educational needs scored at level 3, the highest point on this scale, compared to 14% for typical students. Again, the majority of students scored below level 1 on problem solving.

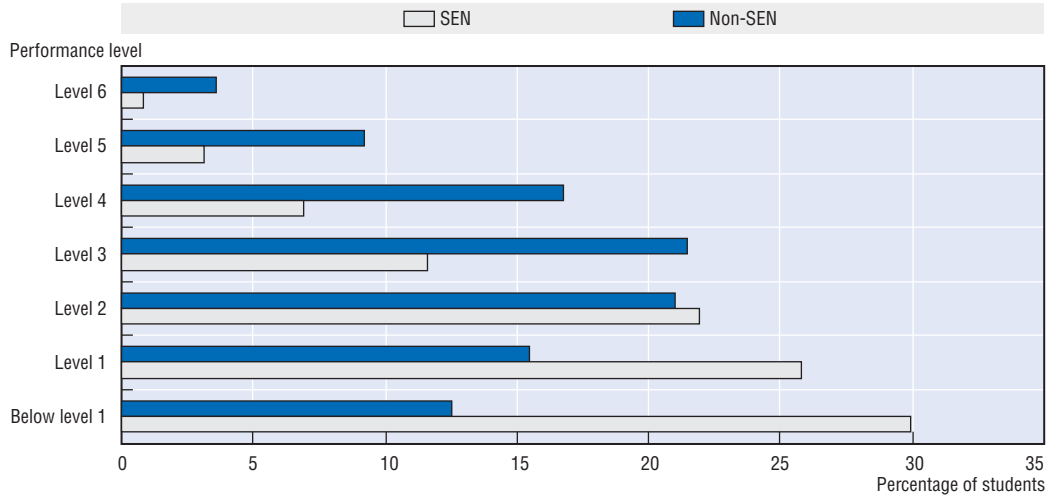
Table 7.6. **PISA student performance (mean scores) by SEN**

Subject	Not SEN		Functional disability		Intellectual disability		Limited Language proficiency		Other	
	n = 272398		n = 311		n = 1815		n = 900		n = 741	
	M	SD	M	SD	M	SD	M	SD	M	SD
Maths	483.08	105.73	459.76	102.43	390.72	91.32	429.88	110.22	428.11	87.71
Reading	480.88	102.71	452.10	115.22	376.27	102.86	407.18	112.80	418.09	101.47
Problem solving	482.84	106.61	458.32	101.71	399.93	91.51	432.11	110.59	434.39	82.36

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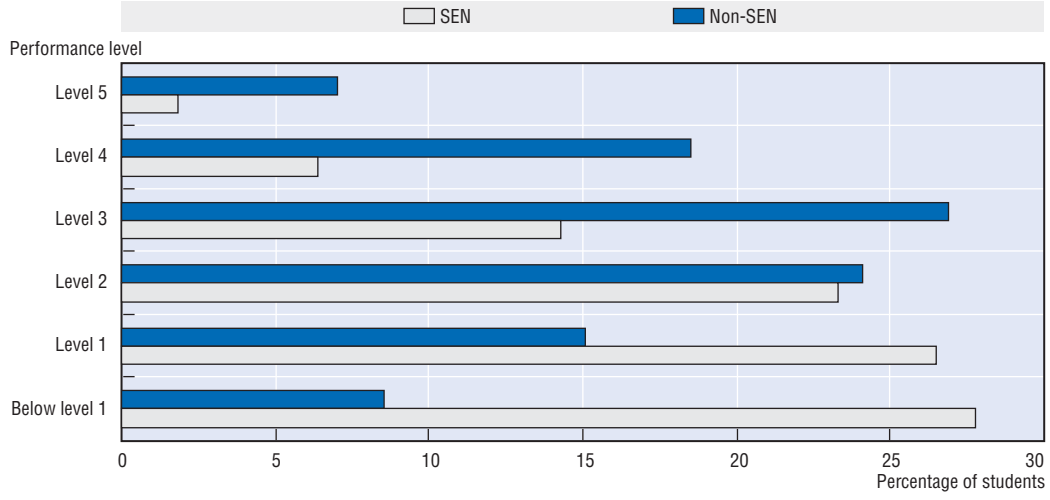
Source: PISA 2003.

Figure 7.1a. **Comparison of student maths performance by SEN status**



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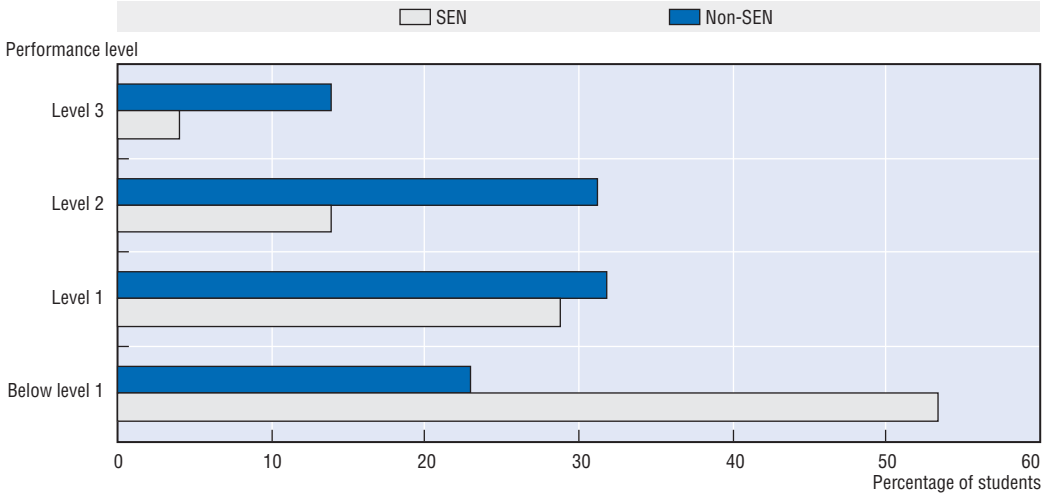
Figure 7.1b. **Comparison of student reading performance by SEN status**



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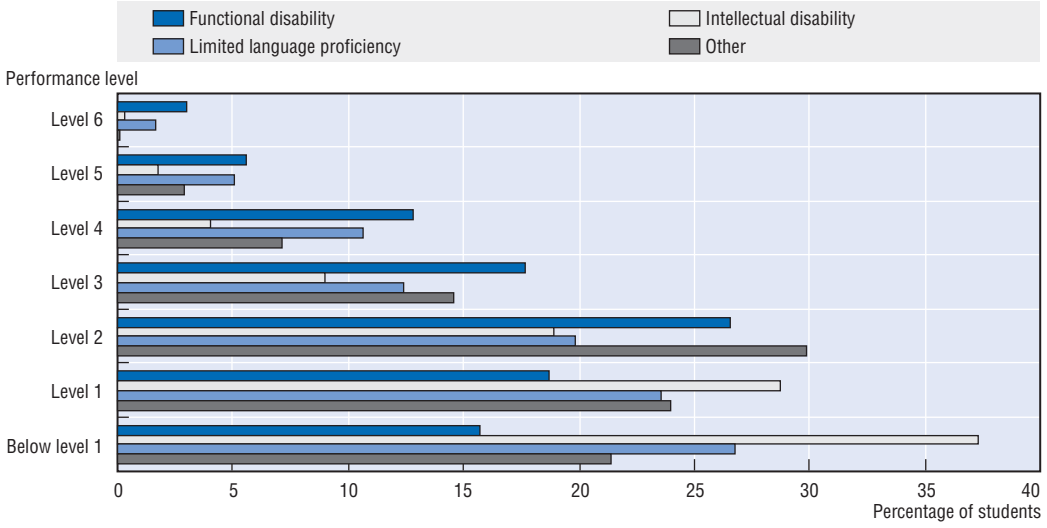
Figures 7.2a-c illustrate the performance of students with special educational needs by type of disability on mathematics, reading and problem solving, respectively. Similar patterns exist across the three academic areas, with students with functional disabilities

Figure 7.1c. **Comparison of student problem solving performance by SEN status**



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Figure 7.2a. **Comparison of student maths performance within SEN status**



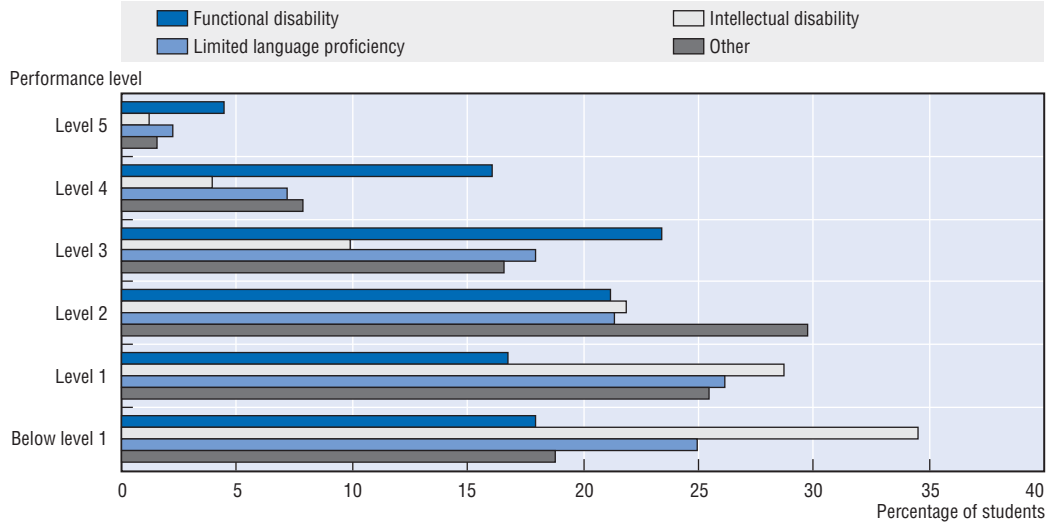
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outperforming their peers with intellectual disabilities in all areas. The majority of students with intellectual disabilities scored at level 1 or below in all assessment areas.

Question 5: Are there differences in PISA 2003 performance by test booklet format?

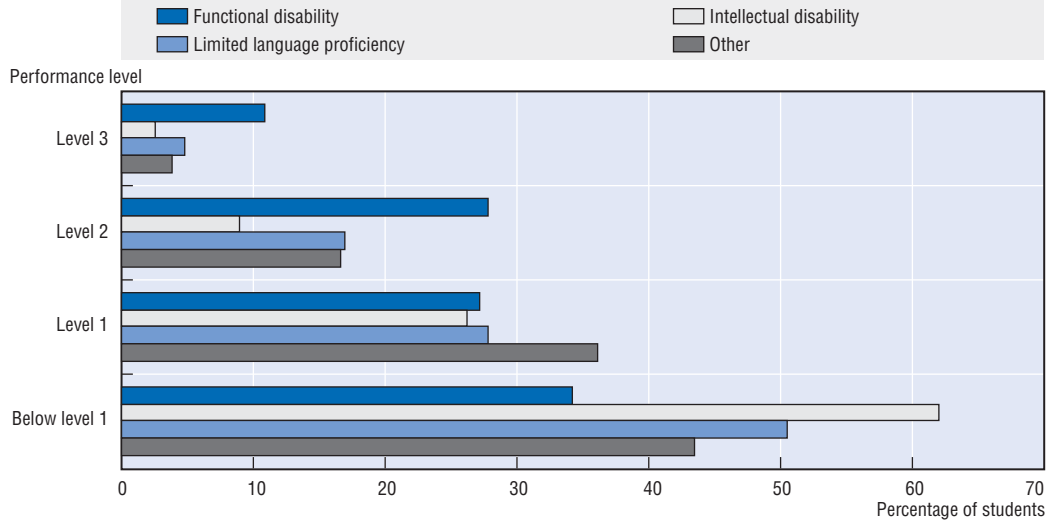
In order to assist countries in meeting the sampling criteria, PISA offered a booklet called UH to be administered to special schools and some primary schools. That is, PISA offered the 13 regular booklets (120 minutes) plus the UH booklet (60 minutes) to these schools, which is referred in the database as Booklet 14. The UH booklet contains a set of the same items that were also used in the regular booklets. The UH booklet was used in seven countries: Austria, Belgium, the Czech Republic, Germany, Hungary, the Netherlands and the Slovak Republic, with a total of 1 048 students. Of the 1 048 students who used the UH booklet, 10 were students with functional disabilities, 533 were students with intellectual disabilities, 4 were students with limited test language proficiency and the remaining 108 were students identified as

Figure 7.2b. **Comparison of student reading performance within SEN status**



StatLink http://dx.doi.org/10.1787/110448436710

Figure 7.2c. **Comparison of student problem solving performance within SEN status**



StatLink http://dx.doi.org/10.1787/110487602280

"other" on the student tracking form. Three hundred and ninety-three students were not categorised as having special needs and were presumably in regular schools rather than in special schools. If a school chose to use the UH booklet, every student in that building had to use that test booklet, resulting in both typical students and students with special educational needs completing the short form of PISA.

Table 7.7 presents the performance scores for students with special educational needs by type of test booklet. Across all performance areas, students using the UH booklet performed significantly lower than equivalent students who used the regular test format.

These same data are presented graphically in Figures 7.3a-c for the mathematics, reading and problem solving performance of students with special educational needs by

Table 7.7. **Comparison of SEN student performance on PISA (maths, reading, problem solving) by type of test booklet, showing percentages of SEN students at each level**

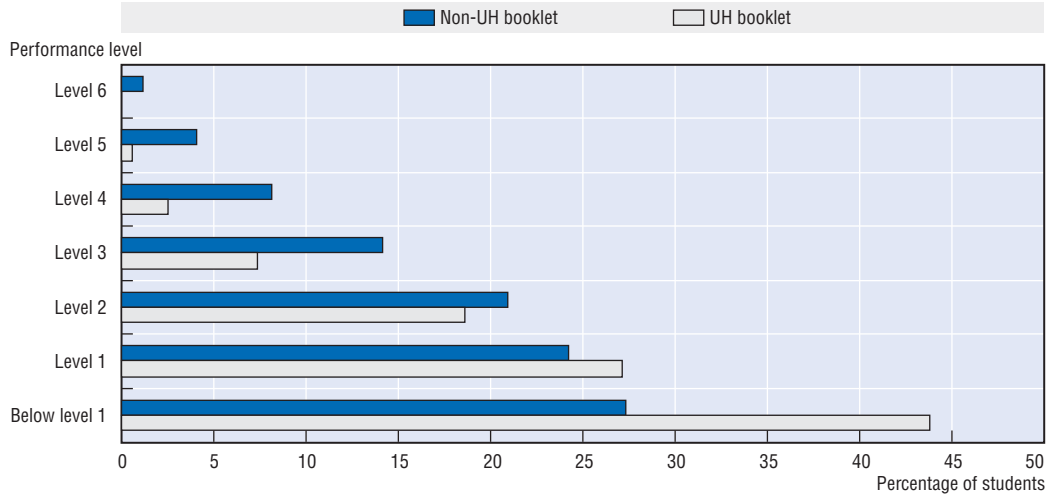
Subject area	Non-UH booklet	UH booklet
Maths (n = 2 987) – mean score/SD[1]	427.19/98.18	346.35/72.96
Below Level 1	23.9	58.42
Level 1	25.7	26.1
Level 2	24.0	12.2
Level 3	13.4	2.9
Level 4	8.3	0.3
Level 5	3.7	0.0
Level 6	1.0	0.0
Reading (n = 3 025) – mean score/SD[1]	415.97/105.23	313.44/80.55
Below Level 1	21.2	58.93
Level 1	25.6	30.5
Level 2	26.3	8.9
Level 3	16.9	1.5
Level 4	7.7	0.2
Level 5	2.2	0.0
Problem Solving (n = 3 026) – mean score/SD[1]	426.69/100.94	383.75/69.81
Below Level 1	46.0	88.40
Level 1	32.5	10.5
Level 2	16.6	1.1
Level 3	4.9	0.0

StatLink http://dx.doi.org/10.1787/110522412747

1. $p < 0.001$.
Source: PISA 2003.

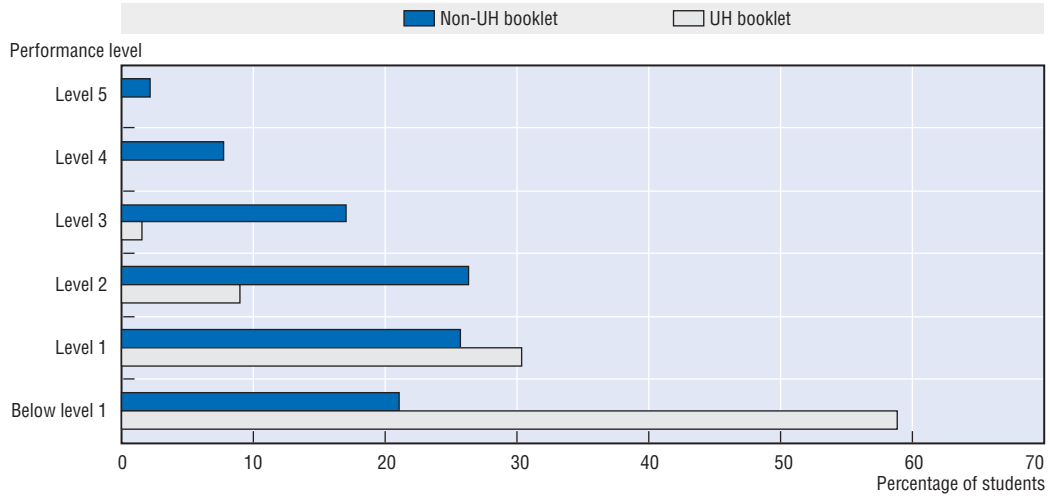
test booklet format. For mathematics performance, nearly twice as many students who used the UH booklet performed below level 1 than students who used the regular test format. Only 0.3% of the students with special educational needs who used the UH booklet

Figure 7.3a. **Comparison of SEN student maths performance by booklet**



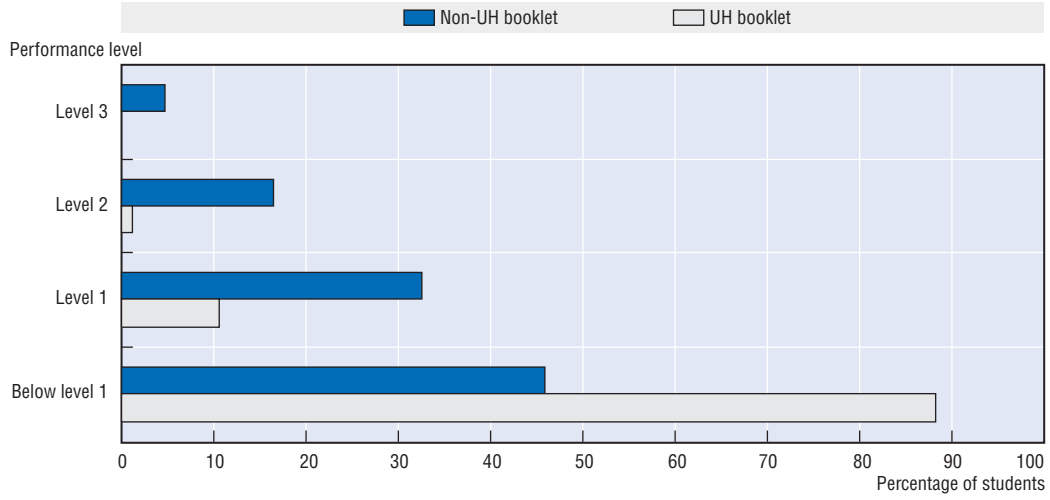
StatLink http://dx.doi.org/10.1787/110567537176

Figure 7.3b. **Comparison of SEN student reading performance by booklet**



StatLink http://dx.doi.org/10.1787/110575437344

Figure 7.3c. **Comparison of SEN student problem solving performance by booklet**



StatLink http://dx.doi.org/10.1787/110576004411

performed above level 3 in mathematics. In terms of reading performance, more than twice as many students with special educational needs performed below level 1 than their peers who used the regular booklet. Less than 2% of the students using the UH booklet performed at level 3 or above. In problem solving, nearly 90% of the students who used the UH booklet performed below level 1.

Questions 6 and 7: How do students with special educational needs compare to typical PISA students on effective learner behaviours? What is the relationship between effective learner behaviours and PISA mathematics performance for students with special educational needs?

PISA 2003 assessed students' approaches to learning mathematics, under the assumption that student performance is affected by positive approaches and that such attitudes are important educational outcomes themselves. PISA identifies four characteristics of effective

learners: motivation, self-related beliefs, emotional factors and learning strategies. Motivation is defined by students' interest in and enjoyment of mathematics; their beliefs about its importance in their personal goal attainment; and their feelings about school. Self-related beliefs focus on confidence and self-efficacy in their mathematics ability. Student anxiety about learning mathematics is the focus of emotional factors. Learning strategies include whether students memorise, elaborate, and control new information related to mathematics. Statements on motivation, emotional factors, and learning strategies were measured on a scale from strongly agree (1) to strongly disagree (4). Statements on self-related beliefs were measured on a scale from very confident (1) to not at all confident (4).

Tables 7.8a-d present the characteristics of students with special educational needs on the four aspects of effective learner behaviours, as compared to typical PISA participants. Summary scores for each behaviour are provided by student group. In addition, individual factors within each behaviour index are coded by a + sign if the group mean response was above the scaled mean, and a – sign if the group mean response was below the scaled mean. Students, with and without special educational needs, had similar summary scores on motivation, although the factor scores varied. Students with special educational needs were slightly less confident in their mathematics abilities than were typical students, across all dimensions of self-related beliefs. Related to emotional factors, student summary scores were identical, while their factor responses were again varied. While students with special educational needs reported slightly less agreement on their use of memorization, elaboration, and control than typical students, overall they were similar in their use of the various learning strategies.

Table 7.9 presents the effect of learner behaviour on mathematics performance. For typical students, all four learner behaviours significantly correlated with performance. For students with functional disabilities, only self-related beliefs significantly correlated with performance. For self-related beliefs, as students' reported confidence and self-efficacy decreased, so too did their mathematics performance. For students with intellectual disabilities and students with limited test language proficiency, both self-related beliefs and emotional factors significantly correlated with mathematics performance. As these students' confidence diminished or their anxiety increased, their mathematics performance decreased. Finally, for students identified as "other", their motivation and self-related beliefs significantly correlated with mathematics performance.

Table 7.8a. **Characteristics of SEN students on effective learner behaviours**

Motivation/Attitudes		
To what extent do you agree with the following statements:	Not SEN	SEN
I enjoy reading about mathematics.	+	–
Making an effort in mathematics is worth it because it will help me in the work that I want to do later on.	–	+
I look forward to my mathematics lessons.	+	–
I do mathematics because I enjoy it.	–	+
Learning mathematics is worthwhile for me because it will improve my career < prospects, chances >.	–	+
I am interested in the things I learn in mathematics.	–	+
Mathematics is an important subject for me because I need it for what I want to study later on.	+	–
I will learn many things in mathematics that will help me get a job.	+	–
Summary score	2.35	2.34

Source: PISA 2003.

Table 7.8b. **Characteristics of SEN students on effective learner behaviours**

Beliefs		
How confident do you feel about having to do the following mathematics tasks:	Not SEN	SEN
Using a < train timetable > to work out how long it would take to get from one place to another.	–	+
Calculating how much cheaper a TV would be after a 30% discount.	–	+
Calculating how many square meters of tiles you need to cover a floor.	–	+
Understanding graphs presented in newspapers.	–	+
Solving an equation like 3x + 5 = 17.	–	+
Finding the actual distance between two places on a map with a 1:10 000 scale.	–	+
Solving an equation like 2(x + 3) = (x + 3)(x - 3).	–	+
Calculating the petrol consumption rate of a car.	–	+
Summary score	2.02	2.24

Source: PISA 2003.

Table 7.8c. **Characteristics of SEN students on effective learner behaviours**

Anxiety/Emotional factors		
To what extent do you agree with the following statements:	Not SEN	SEN
I often worry that it will be difficult for me in mathematics classes.	+	–
I am just not good at mathematics.	+	–
I get very tense when I have to do mathematics homework.	+	–
I get good marks in mathematics.	–	+
I get very nervous doing mathematics problems.	–	+
I learn mathematics quickly.	–	+
I have always believed that mathematics is one of my best subjects	–	+
I feel helpless when doing a mathematics problem	+	
In my mathematics class, I understand even the most difficult work	+	
I worry that I will get poor marks in mathematics	–	+
Summary score	2.59	2.59

Source: PISA 2003.

Table 7.8d. **Characteristics of SEN students on effective learner behaviour**

Learning strategies		
To what extent do you agree with the following statements:	Not SEN	SEN
When I study for a mathematics test, I try to work out what are the most important parts to learn.	–	+
When I am solving mathematics problems, I often think of new ways to get the answer.	+	–
When I study mathematics, I make myself check to see if I remember the work I have already done.	–	+
When I study mathematics, I try to figure out which concepts I still have not understood properly.	–	+
I think how the mathematics I have learnt can be used in everyday life.	+	–
I go over some problems in Mathematics so often that I feel as if I could solve them in my sleep.	+	–
When I study for mathematics, I learn as much as I can off by heart.	+	–
I try to understand new concepts in mathematics by relating them to things I already know	–	+
In order to remember the method for solving a mathematics problem, I go through examples again and again.	–	+
When I cannot understand something in mathematics, I always search for more information to clarify the problem.	–	+
When I am solving a mathematics problem, I often think about how the solution might be applied to other interesting questions	+	–
When I study mathematics, I start by working out exactly what I need to learn	–	+
To learn mathematics, I try to remember every step in a procedure	–	+
When learning mathematics, I try to relate the work to things I have learnt in other subjects.	+	–
Summary score	2.27	2.29

StatLink http://dx.doi.org/10.1787/110587406458

Source: PISA 2003.

Table 7.9. **Effects of effective learner behaviours on SEN student performance**

Learner behaviours	Not SEN		Functional disability		Intellectual disability		Limited language proficiency		Other	
	M	SD	M	SD	M	SD	M	SD	M	SD
Motivation/Attitudes	2.35[1]	0.65	2.40	0.62	2.32	0.61	2.19	0.66	2.53[1]	0.63
Beliefs	2.02[1]	0.57	2.14[1]	0.58	2.33[1]	0.62	2.07[1]	0.56	2.33[1]	0.57
Anxiety/Emotional factors	2.59[1]	0.30	2.58	0.32	2.57[1]	0.37	2.53[1]	0.32	2.70	0.32
Learning strategies	2.27[1]	0.43	2.26	0.43	2.30	0.51	2.18	0.44	2.44	0.45
Student math performance	483.08	105.73	459.76	102.43	390.72	91.32	429.88	110.22	428.11	87.71

StatLink http://dx.doi.org/10.1787/110603873823

1. Correlation is significant at the 0.00. level (2-tailed).
Source: PISA 2003.

The data presented in the tables above on students' perceptions of school and their own learning behaviours show several interesting differences between typical and SEN students, as well as differences between different categories of SEN students. Some of these differences could generate hypotheses regarding the education of SEN students that would be interesting to explore further in future studies. For example, although summary scores are often very close for the two groups, there are differences in terms of the individual factors making up these scores and it could be interesting to examine whether and how these are related to differences in policies and practices in the classroom for these students as well as their academic performance.

Questions 8 and 9: What is the economic, social and cultural status of students with special educational needs who participated in PISA 2003? and how do students with special educational needs compare to typical PISA students on economic, social and cultural status)?

PISA created the index of economic, social and cultural status (ESCS) to capture aspects of a student's family, home background and occupational status. ESCS is derived from the following variables: the highest international socio-economic index of occupational status of the father or mother; the highest level of education of the father or mother; and the number of books at home, as well as access to home educational and cultural resources (Questions 17-19 on the Student Questionnaire) (OECD, 2004b). The rationale for this set of variables is that socio-economic status is usually determined by a combination of occupational status, education, and wealth. Access to relevant household items is used as a proxy for wealth, since there is no variable in the PISA database for family income.

Table 7.10 presents the ESCS characteristics of the students who participated in PISA 2003. While the various groups were very similar in ESCS, students with functional disabilities had slightly higher ESCS overall than all other student groups, including typical students. Students with intellectual disabilities had the lowest ESCS.

Table 7.10. **ESCS characteristics of SEN students**

By type of disability

Characteristic	Not SEN	Functional Disability	Intellectual Disability	Limited Language Proficiency	Other
Average number of books in the home (n = 3 096)					
0-10 books	13.6	12.8	17.5	22.1	14.3
11-25 books	17.4	13.4	17.6	23.2	18.2
26-100 books	29.6	32.4	31.3	26.8	33.7
101-200 books	17.6	17.2	16.9	10.4	18.7
201-500 books	13.6	14.1	8.8	9.0	8.8
More than 500 books	8.3	10.0	7.9	8.5	6.3
Home educational and cultural resources					
Desk to study at	86.3	88.6	77.2	83.6	87.5
Own room	78.6	81.1	79.5	74.7	88.4
Quiet place to study	78.4	79.8	68.8	72.4	78.4
Computer to use for school work	68.8	78.5	71.2	71.3	80.5
Educational software	39.3	44.9	39.2	38.1	36.1
Link to the internet	55.1	66.3	57.3	56.4	64.0
Own calculator	90.0	92.9	86.0	87.5	92.7
Classic literature	45.3	47.1	27.0	28.9	30.9
Books of poetry	45.4	48.1	34.6	40.1	31.7
Works of art	43.9	46.1	41.3	43.9	45.5
Books to help with school work	78.1	77.8	67.4	66.0	56.1
Dictionary	93.5	93.9	83.4	90.0	87.2
Dishwasher	49.0	53.7	57.1	52.6	71.0

	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Highest parental occupational status	47.18	17.17	47.7	16.8	44.2	16.7	45.8	18.3	42.61	15.62
Highest parental level of education – in years	12.38	3.77	12.6	3.6	12.4	3.6	12.4	4.5	12.7	3.14
Index of socio-economic and cultural status	–0.18	1.08	–0.08	1.02	–0.35	1.03	–0.30	1.15	–0.29	0.82

StatLink http://dx.doi.org/10.1787/110603873823

Source: PISA 2003.

Question 10: What is the relationship between the ESCS backgrounds of students with special educational needs and their PISA performance?

Table 7.11 presents the PISA performance of students, with and without special educational needs, by ESCS levels (highest one-third *versus* lowest one-third). Across all performance areas, students with the highest ESCS levels performed significantly higher than students from the lowest ESCS levels.

Table 7.12 presents a similar pattern for students with special educational needs. While their overall mean scores were lower than the typical students across all test areas, their performance was affected by their ESCS level. Students with special educational needs and higher ESCS scored significantly higher on the PISA performance areas than their lower ESCS peers with special educational needs.

Table 7.13 presents mathematics performance by ESCS for students with special educational needs in OECD countries only. While these results should be viewed with extreme caution due to the low number of students with special educational needs who participated in PISA from some of these countries, the trend here is consistent with findings from the previous tables. In nearly two-thirds of the OECD countries, ESCS was positively correlated with mathematics performance.

Table 7.11. **Comparison of student performance on PISA (maths, reading, problem solving) by ESCS**

Subject area	Highest ESCS	Lowest ESCS
Maths (n = 135 943) – mean score/SD[1]	524.17/95.12	411.13/94.44
Below level 1	6.4	29.3
Level 1	11.9	26.3
Level 2	21.5	22.4
Level 3	25.5	13.4
Level 4	20.4	5.9
Level 5	10.6	2.1
Level 6	3.6	0.6
Reading (n = 135 943) – mean score/SD[1]	518.78/92.92	416.75/94.53
Below level 1	4.5	18.9
Level 1	11.1	26.6
Level 2	23.2	29.1
Level 3	31.4	18.0
Level 4	22.2	6.2
Level 5	7.5	1.1
Problem Solving (n = 135 943) – mean score/SD[1]	523.94/94.62	410.29/97.70
Below level 1	44.5	24.31
Level 1	36.2	36.5
Level 2	16.4	30.4
Level 3	2.9	8.7

StatLink http://dx.doi.org/10.1787/110636670775

1. $p < 0.001$.
Source: PISA 2003.

Table 7.12. **Comparison of SEN student performance on PISA (maths, reading, problem solving) by ESCS**

Subject area	Highest ESCS	Lowest ESCS
Maths (n = 2 180) – mean score/SD[1]	464.50/100.10	373.24/80.13
Below level 1	13.3	43.5
Level 1	21.1	28.5
Level 2	24.6	20.2
Level 3	18.6	5.0
Level 4	13.7	2.3
Level 5	6.6	0.4
Level 6	2.3	0.0
Reading (n = 2205) – mean score/SD[1]	454.17/103.66	360.62/92.56
Below level 1	11.7	38.0
Level 1	20.3	32.1
Level 2	27.7	20.6
Level 3	22.8	7.1
Level 4	13.0	2.1
Level 5	4.5	0.1
Problem Solving (n = 2205) – mean score/SD[1]	465.26/98.06	375.90/88.16
Below level 1	31.7	69.0
Level 1	34.3	24.8
Level 2	25.1	5.5
Level 3	9.0	0.8

StatLink http://dx.doi.org/10.1787/110668421468

1. $p < 0.001$.
SEN = all four categories (F, I, LLP and O).
Source: PISA 2003.

Table 7.13. **SEN student mathematics performance by ESCS**

OECD member countries only

	Mathematics score		ESCS	
	M	SD	M	SD
Australia[1]	420.86	106.28	–0.21	0.86
Austria	381.27	79.99	–0.71	0.76
Belgium	343.24	92.04	–0.62	0.95
Canada[1]	435.42	84.18	0.18	0.89
Czech Republic	393.55	68.43	–0.34	1.16
Denmark	345.09	87.54	–0.59	0.89
Finland[1]	454.14	78.79	–0.16	0.83
Germany	331.31	60.78	–1.26	1.43
Hungary[1]	385.57	89.59	–0.53	0.80
Iceland	437.81	73.16	0.62	0.76
Ireland[1]	393.34	79.64	–0.51	0.88
Italy[1]	393.68	104.61	–0.72	0.88
Luxembourg	577.12	78.61	1.15	0.87
Mexico[1]	371.99	89.25	–1.29	1.21
Netherlands[1]	402.12	70.14	–0.55	0.89
New Zealand[1]	463.96	94.51	0.03	1.01
Norway	435.27	95.27	0.11	0.74
Poland[1]	487.46	91.15	–0.27	0.83
Portugal	354.81	76.99	–1.21	1.10
Slovakia[1]	413.30	123.24	–0.94	1.26
Sweden[1]	407.83	101.32	–0.27	1.10
Switzerland[1]	398.04	94.42	–0.65	0.97
Turkey	359.23	54.63	–1.54	0.58
United Kingdom[1]	435.32	99.17	–0.21	1.00
United States[1]	406.37	87.80	–0.30	1.04

StatLink http://dx.doi.org/10.1787/110683776050

1. $p < 0.001$.
Incomplete data / No SEN Students: Greece.
Source: PISA 2003.

Discussion

This descriptive study examined the participation and performance of students with special educational needs in PISA 2003. PISA 2003 represented the first year that the Student Tracking Form allowed countries to describe the test participants by special educational needs, therefore allowing this study to be completed. The study described the demographic characteristics of the students, their educational experiences and perceptions, their learning behaviours, and their PISA performance. While PISA 2003 focused on mathematics performance, reading and problem solving abilities were also examined. The performance of students with special educational needs was examined in all three assessment areas, as well as in relation to typical students, test format, and socioeconomic status.

Overall, the percentage of students identified as having some type of special educational need was extremely low, representing less than 2% of the PISA population. However, the trends that are present within and between these students and the typical PISA participants highlight concerns that merit further exploration and discussion. These concerns are discussed below.

- *Sampling level exclusion of students with special educational needs*: While this chapter does not address the sampling strategy and issues of the exclusion of students with special educational needs at the country level, the study does indicate that a significantly smaller

percentage of students with special educational needs are participating in PISA than exist in the countries. As all OECD/CERI reports – including the current one – consistently indicate, the percentage of students with disabilities, difficulties and disadvantages in member countries ranges from 5-15%, not less than 2% as represented in this administration of PISA. Further study of the exclusion mechanisms at the sampling level is warranted to understand this low participation rate of students with special educational needs. It is worth pointing out at this stage however that countries vary considerably in terms of the proportions of students they excluded within schools, with Spain and the United States, for example, excluding around 7% as opposed to Japan that excludes 0%. Given the data collected via the Electronic Questionnaire and reported earlier in this monograph we know that in Japan relatively few students with disabilities, difficulties and disadvantages are provided with additional resources. As it is unlikely that this fact truly represents a low prevalence rate of disabilities or learning difficulties in this country, but it more possibly reflects differences in funding and resource allocation mechanisms, it is probable that a high proportion of Japanese students with disabilities, difficulties and disadvantages were actually included in the PISA assessment. These students would have quite possibly been excluded in countries such as the United States or Spain, as they would have been identified as meeting one of the three exclusion criteria. A follow-up questionnaire on students with special educational needs who are excluded at the country or school level would further our understanding of who is excluded from the sample and why.

- *Student Tracking Form SEN code*: PISA includes the SEN code on the Student Tracking Form and this represents a step forward in acknowledging the existence of students with special educational needs and their right to be included in the test. However, allowing the countries to define how they will use the four broad categories of special educational needs (functional disability, intellectual disability, limited test language proficiency, and other) results in wide discrepancies in student ability under the seemingly same educational label. In addition, the use of national definitions makes generalization of the categories across countries problematic. To facilitate more precision in testing and the interpretation of the test results, it is recommended that PISA adopt the standardised definitions for disabilities, difficulties and disadvantages that have been developed by OECD/CERI, as described in Chapter 1 of this monograph. Coordination between the PISA national managers and the CERI national advisers may facilitate this process.
- *PISA test format and item review*: Independent of which test format (regular or UH booklet) was administered to students with special educational needs, they performed lower than typical students across all measures. It is recommended that a more in-depth study be completed which would examine the nature of the test items, student educational needs, and student performance in both test booklet formats. In particular, it would be important to understand if consistent patterns exist related to specific items, students' special education needs, and student performance. Paralleling this analysis should be a study of the effect of standardised accommodations on student performance.
- *ESCS index and student performance*: The cursory examination of ESCS and student performance in this study provides good support for the view that special educational needs extend beyond just those students who have disabilities, to include students with difficulties and disadvantages. Across the entire population, those students who had lower ESCS scores consistently and significantly scored lower in all PISA assessment areas. Further study is warranted to examine the impact of additional resources in modifying these outcomes.

- *School questionnaire and SEN*: A preliminary analysis of the school questionnaire suggests that important variables related to special needs are absent. In particular, the questionnaire does not capture data relative to the number of students with special educational needs in a building, the number or qualifications of special education teachers and support staff in the building, or information about the instructional strategies used at the classroom level to facilitate the learning of students with special educational needs. The inclusion of these variables on the school questionnaire would increase our understanding of the learning situation of the students who have educational labels and who participate in PISA.

Notes

1. The term Special Educational Needs rather than disabilities, difficulties and disadvantages is used here, as this is the term used in the PISA study and publications.
2. This replicates findings reported elsewhere in this monograph; see particularly Chapter 8.

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Chapter 8

Over-representation of Males in the Students Receiving Additional Resources for Disabilities, Difficulties and Disadvantages

Background

A strong and consistent finding reported in both this monograph and the earlier ones (OECD, 2000; pp. 91-94; OECD 2004a, pp. 109-113; OECD 2005, pp. 122-127) has been the preponderance of the number of males over females in a wide range of analyses. Whether done by location (special school, special class, regular class), cross-national or national category, age of student, or stage of education, there are almost universally more male than female students receiving additional resources.

This apparent inequity raises a wide range of issues. It could be seen as reinforcing a feminist critique of society, illustrating just one more of the many ways in which males are favoured over females in both developed and developing societies. If there are scarce resources, males are more likely to achieve access to them. However the provision of additional resources may carry with it some form of labelling or categorisation whose effects are not necessarily benign, with the possibility of negative personal, educational, social or future employment outcomes for those labelled in this way. When the provision of additional resources is linked to a segregated form of educational experience in special schools or special classes, the potential for such negative outcomes may well be increased. Hence an apparent favouring of males may have the reverse effect. Daniels *et al* (1999) provide an insightful analysis of the dilemmas raised by this disproportionality for the development of the concept and practice of equality of opportunity.

This chapter does not attempt to enter into debates of this kind which, amongst other things, call for a sophisticated understanding and analysis of the role, function and outcomes of education in general and the education of those with disabilities, difficulties and disadvantages in particular. It has the more limited aim of providing a brief review of possible factors or mechanisms underlying the over-representation of males in those receiving additional resources. This is followed by a summary of the main empirical findings on this topic presented in Chapter 5 of the monograph. A final section discusses the limited progress that has been made to date in understanding the data in relation to the factors or mechanisms involved and calls for a more adequate data base to facilitate further progress.

Possible factors or mechanisms underlying the disproportionality*

A central issue in this gender disproportionality is whether it reflects actual differences between male and female students or results from procedures and practices which are in some way biased or discriminatory. Actual differences could be of many different types, including differential prevalence of sensory or other disabilities, differential maturity rates

* This section depends to a considerable extent on review papers and other materials prepared and published by Donald Oswald, Martha Coutinho and colleagues as part of *Project PROGRESS: Predicting Outcomes by Gender and Exceptionality Status* funded by the US Office of Special Education Programs under grant (H324D000040-01). See *http://views.vcu.edu/progress/Home.htm*

and differences in levels and types of activity. Identification procedures and educational practices at educational system, school or classroom level can have a discriminatory effect.

The "Three Bs" are commonly cited to account for over-representation of males – ***biology***, ***behaviour*** and ***bias*** (Coutinho *et al.*, 2001). A short discussion of each of these possible factors follows.

Biological factors

The higher incidence of males could be attributable to genetic or biological differences between the sexes. Such factors would appear to be implicated in relation to disabilities, although their possible implication in learning or behaviour difficulties should be acknowledged. Evidence of a biological basis for any gender imbalance in the provision of additional resources because of social or economic disadvantage does not appear to be available.

Disabilities

The case for these factors is based on gender differences in genetics, hormones, maturation and development, brain function, cognition, and behaviour. Research has shown higher rates among boys for foetal mortality, post-natal mortality, complications during pregnancy and childbirth and congenital malformations (cited by Oswald *et al.*, 2003).

There is some evidence that males are more vulnerable than females throughout the developmental years to the effects of illness and trauma (*e.g.* HMSO, 2001; Lemons *et al.*, 2001). This may apply to disability overall, or to one or more specific disabilities. Evidence on this is patchy. For example, data for countries in Asia and the South Pacific from the Asia-Pacific Development Center on Disability (APCD) (*www.apcdproject.org/countryprofile/index.html*) suggest that in approximately half of the countries where data are available the percentage of males with disability approximates to 60%. Note, however, that data quality is suspect: some data are from sample surveys, others from national censuses, they refer to different dates, and definitions of disability vary from country to country. Also, estimates of prevalence vary by a factor of over ten. In countries where the overall ratio is approximately 60% and where data on individual categories of disability are available (Bangladesh and Thailand) most individual categories also approximate to 60% (*e.g.* in Bangladesh 1991 census – Visually Impaired 57.4%, Hearing Impaired 56.4%, Intellectually Impaired 60.4%, People with leprosy 62.5%, Physical Disability 61.9%).

Data from developed countries can show similar greater numbers of males. For example, Table 8.1 presents data from a sequence of Canadian surveys.

The results as given in Table 8.1 show a great deal of volatility over time within the five-year age groupings. Not only does this volatility occur across time but also across cohorts. As the children under 5 years of age grew older between 1986 and 1991, the gender ratio changed. In 1986, girls constituted the majority of disabled children under 5 years of age but by 1991 boys constituted a majority of these children when they were 5 to 9. However, as the children who were aged from 5 to 9 in 1986 became 10 to 14 years old in 1991, the percentage of boys decreased. If indicators are at all tied to gender, then changes that occur over time could be due to changes in the sex composition of children with disabilities.

Table 8.1. **Sex ratios for persons with disabilities for children under 15 years of age, Canada, 1983-84, 1986 and 1991 (Table values are percentage of males)**

Age group	Year of survey		
	1983	1986	1991
0-4 yrs	56.4	47.7	56.3
5-9 yrs	61.2	63.0	61.2
10-14 yrs	56.2	54.8	61.1

Source: Statistics Canada, Health Division and Department of the Secretary of State, Social trends analysis directorate, 1986; report of the Canadian health and disability survey, 1983-84 (Ottawa, Author, 1986); Avard, Denise, Children and Youth with Disabilities in Canada: the 1986 health and activity limitation survey (Ottawa, Statistics Canada, 1996), Appendix A, p. 58, Table 2; and Children and Youth with Disability, Chapter 8 in The Health of Canada's Children: a CICH profile (Ottawa, Canadian Institute of Child Health, 1997), Table VIII.1.

Skårbrevik (2002), in a Norwegian survey which included children attending pre-school kindergartens, concluded from the pattern of results that the higher incidence of boys (65%) considered eligible for special educational treatment must be attributed to genetic or biological differences between the sexes.

The US National Longitudinal Transition Study reported that approximately two-thirds of all students with disabilities at the secondary level were boys (US Department of Education, 1998). Percentages above 50% were found for all disabilities (including hearing impairments, orthopaedic impairments, deafness, visual impairments, speech impairments and multiple disabilities), the only exception being deaf/blindness where boys and girls were identified at approximately the same rate.

Data from Scotland show a similar pattern for adults, with 61.5% males in 16-20 year olds with learning disabilities who have left school, and 55.3% males in a 21-64 year-old group (Social Work Statistics Release, 2004, accessible via *www.scotland.gov.uk*).

Whether or not there are overall gender differences in the incidence or prevalence of disability, it may be that there are such differences for individual disabilities. Some low incidence disabilities are known to be sex-linked, and there is strong evidence that autism is much more likely to affect males than females (Yeargin-Allsop *et al.*, 2003).

It is important to appreciate that gender imbalances for disabilities at the school level, while they may have a biological component, could well reflect the operation of "behaviour" or "bias" factors – either exclusively or in combination with biological factors.

Difficulties

The research literature typically shows greater imbalance in the male/female ratio for students with learning, behavioural or emotional difficulties than for those with disabilities. For example, in the United States males were found to form 73% of students identified as having learning disabilities (LD) and 76% of students with emotional disturbance (ED) (both LD and ED categorised in the OECD cross-national category scheme as falling in cross-national category B) (Valdes *et al.*, 1990). A more recent US national study (Halfon and Newacheck, 1999) among children up to age 17, based on parents' reports, found students identified with LD as 70% male (percentage adjusted for a range of social demographic factors).

However, the case for a genetic basis of such differences is not at all clear (see Reschly, 1996 cited by Oswald *et al.*, 2003). Analyses of twin studies, while finding some genetic influences also note environmental influences and are cited as failing to support gender

differences as making a significant contribution to the etiology of learning disabilities (Lyon, 1996). Neuropsychological research on learning disabilities shows promise for elucidating possible biological and genetic factors (Pugh *et al.*, 2001).

It has been suggested that males and females are differentially susceptible to presenting with learning difficulties in schools for biological reasons. For example, primary language abilities favour females in the acquisition of basic school subjects such as learning to read or write (Geary, 1996). Sociobiological theories assert that the division of labour between the genders makes girls genetically better qualified for language and communication whereas boys are genetically predisposed to aggressive behaviour and learning by doing (Sørlie and Nordahl, 1998). Also it has been suggested that the general slower maturation rate of males may play a part (Richardson *et al.*, 1987).

Conclusion on "biology" as a factor in male over-representation

It appears highly likely that one factor or mechanism resulting in an over-representation of males categorised as needing additional resources in educational settings for disabilities is genetic or biological differences between the sexes. The evidence for these factors being influential in the very strong over-representation of males receiving additional resources for behavioural or learning difficulties is more speculative.

Behavioural factors

While early research focused on possible biological factors as underlying an over-representation of males in those receiving special education, more recent studies have concluded that behavioural differences between boys and girls can account for the higher male referral rates in special education systems (*e.g.* Shaywitz *et al.*, 1990a).

Caseau *et al* (1994) found that there were many more boys than girls identified as having serious emotional disorders at adolescent level. The most common reason for referral to clinics was the presence of externalising behaviours, such as being disruptive in the school classroom. However, they cast doubt on the interpretation that this represented a genuine lower prevalence of serious emotional disorders among girls and concluded that it was more likely that some form of gender bias was responsible (see following section on bias).

There is considerable evidence that males and females are differentially susceptible to behaviour difficulties in schools. Males more often experience failure and frustration when basic subjects are taught and show more disruptive and aggressive behaviour in such situations (Atkinson *et al.*, 1993). Their externalising reactions to failure make boys more visible to teachers and hence more likely to be identified (Fylling, 1998; Shaywitz *et al.*, 1990). Girls are commonly reported as being more cooperative and conscientious in the classroom, with behaviour patterns which match more closely the expectations of teachers than those of boys (McIntyre and Tong, 1999, and Sørlie and Nordahl, 1998).

Conclusion on "behaviour" as a factor in male over-representation

It is important to appreciate that whilst any differences in the behaviour of boys and girls might be most obviously associated with boys being more likely to be identified as having, or presenting, difficulties in the classroom, this does not preclude the possibility that this is a factor in the identification of boys with disabilities or disadvantages. The disruptive behaviour of some male pupils with, say, mental retardation could make them more likely to be given additional resources of some form while girls of the same cognitive

level of functioning are not similarly identified. Several studies conclude that teachers are more likely to refer students for special education provision where there is some combination of poor classroom performance and behavioural difficulties (*e.g.* MacMillan *et al.*, 1996).

It appears likely that the over-representation of males is a complex function of actual male/female differences in behaviour and teachers' social or cultural expectations or preferences manifesting themselves in teacher-pupil interactions (however Oswald *et al.*, 2000 consider this issue to be currently unresolved).

Bias – environmental and cultural factors

Possible inequities in the relative treatment of males and females can manifest themselves at all levels of society. The giving of greater social priority to the education of males than that of females is a factor or mechanism known to be important in some socially conservative cultures. For example, this is illustrated by Tunisian data. As shown in Table 8.2, the number of females reported with disabilities in 1975 was extremely low. Between 1975 and 1994, while the number of disabled men reported more than doubled, the number of disabled women reported grew by many more times. This resulted in the percentage of women in the disabled population tripling between 1975 and 1994. (There are data which demonstrate that this change primarily occurred between 1975 and 1984.) It is clear that disabled women were undercounted in 1975. Such undercounting would be likely to result in fewer females with disabilities being given additional resources in school settings. It is not clear whether the remaining over-representation of males in the 1994 data (approximately 60/40) indicates that this mechanism is now inoperative, or whether there is still social priority given to males (but at a level found in other cultures).

Table 8.2. **Number and percentage of persons with disabilities (15 years and older), Tunisia, 1975 and 1994**

	1975	1994
Females	2 660	33 274
	10.40%	37.80%
Males	22 900	54 736
	89.60%	62.20%

Source: Tunisia, Institut national de la statistique, Recensement général de la population et des logements, 8 Mai 1975, Volume III, Caractéristiques démographiques, tableaux et analyses des résultats du sondage au 1/10^{e} (Tunis, 1975).

In situations where the education of males is given greater social priority than that of females, it is possible that males from socially or economically disadvantaged settings would be more likely to receive additional resources than females.

In developed countries, the decreased need for traditional working skills in society may be moving schooling away from the traditional types of male activity thus devaluing "masculinity" in favour of "femininity", leading to boys having more problems with schooling and thus being more likely to be thought of as needing special education. This view that schooling is becoming increasingly "feminised" is supported by data showing an increasing proportion of female teachers in schools especially during the primary years (McIntyre and Tong, 1998; OECD, 2002).

This more sociological approach suggests that, whether or not the behaviour characteristics of males result from biological dispositions or are learned in social settings,

they result in boys being more visible in the classroom, hence getting more attention than girls (Fylling, 1998). Less able boys are more likely to be identified as problem students. Girls lose out in the sense that their learning and other school-related problems are less likely to be identified.

An early study by Davis (1976), cited by Oswald *et al*. (2003), investigated teachers' priorities when referring students for special education and reported that more boys than girls were referred (including those referred for behaviour problems) and that all of the students ranked highest for learning or adjustment problems were boys. Davis concluded that girls were relatively ignored in the referral process, although there was no direct evidence for bias. Later studies show similar findings (*e.g*. Del'Homme, 1996) although there are others which have been interpreted differently (Witek and Little, 1996).

Other studies concentrate more directly on the under-representation of girls when studying gender disproportionality. There is, for example, some evidence from the United States that the average IQ of girls referred for mental retardation is somewhat lower than that of boys (Wehmeyer and Schwarz, 2001). Wagner (1991), discussing the United States' National Longitudinal Transition Study of Special Education Students (NLTS) emphasises that, although girls are under-represented, those who are identified are more seriously impaired. Over a range of disability categories, females had marginally greater functional deficits than males.

A somewhat different factor, which may have similar effects, is an increased emphasis on the need for academic learning in schools in many school systems. In countries such as the United Kingdom (England) where schools have been "named and shamed" because of their poor performance in national league tables at different age levels, there is pressure to exclude those pupils who would perform poorly. If boys are perceived as more difficult to process through the mainstream system, they will be more likely to be identified and perhaps referred to some unit which takes them out of the reckoning for that school.

In general terms, it is possible that the processes that measure and interpret the ability, achievement, and behaviour of students in schools (*i.e*. referral, assessment, eligibility) may work differently for males and females (Continuo *et al*., 2002).

A study in English mainstream schools in one local authority by Daniels *et al* (1999) found major differences between apparently similar schools in the gender ratios of those receiving additional resources. One school operated at a gender ratio of one to one (*i.e*. 50/50 male/female) when adjusted for the overall numbers of boys and girls in the school. A second school had an adjusted gender ratio of eight to one (*i.e*. almost 90/10 male/female). This provides evidence for differential biasing factors in the two schools, suggesting that schools may exert a considerable influence over local practice in relation to gender. The study also showed that not only were more boys provided with additional resources, but also that they are given more time (gender difference increases as hours of additional support increase), and that boys were more likely to be allocated the more expensive forms of support.

The Daniels study suggests that the categories used to decide on the provision of additional resources are subject to local interpretation. There is also the possibility that the definitions of the categories encapsulate gender bias. For example in the United States, it has been suggested by Oswald *et al*. (2003) that the type of emotional problems that girls present may not be typically identified by school personnel given the definition of the United States' national category of emotional disturbance (though it should be noted that the common female presenting condition of adolescent depression is incorporated into the definition).

Bias may be introduced by factors outside the school. Some categories of disabilities or difficulties are seen as more desirable and acceptable than others. In the United States, the category "Specific Learning Disability" (LD) is seen as more socially desirable than "Mental Retardation" (MR) and "therefore it is likely to be the educationally informed middle class who push to ensure the LD label for their children and especially for their sons" (Daniels *et al.*, 1999 – citing Carrier, 1983). Such a factor would reduce the imbalance for MR (typical figure 60% male – American Psychiatric Association, 2000) and increase it for LD (typical figures 73% to 67% – Oswald *et al.*, 2003). Typically, research reports extremely high ratios for individual categories such as dyslexia and autism where it seems intuitively that there could well be "informed parent" pressure. A study involving 11 804 British children (age 10) found that when specified criteria for dyslexia were used, 269 children qualified as dyslexic. These included 223 boys and 46 girls, for a ratio of 4.51 to 1 (83% males) (Miles *et al.*, 1998). Fombonne (1997) reviewed twenty-three epidemiological surveys of autism between 1966 and 1998 with an average male/female ratio of 3.8 to 1 (79% males). In the absence of research designed to throw light on the mechanisms involved, there is of course no suggestion that this type of bias is the only, or a main, factor involved.

Conclusion on "bias" as a factor in male over-representation

It would be surprising if the complex many-levelled systems through which decisions are made on students receiving additional resources for disabilities, difficulties and/or disadvantages did not incorporate a variety of gender biases. The types of bias discussed in the above section focus virtually exclusively on those factors which would result in a preponderance of males. This is, perhaps, not surprising when the phenomenon of interest is the over-representation of males. It might, however, in itself indicate a bias in the research literature in this field.

The surprising aspect is the relative consistency of the degree of over-representation. As it would be unlikely that the various possible types of bias are consistent across the wide range of educational systems set in countries with differing educational ideologies and traditions, a sensible strategy would appear to be to explore such variation as exists on gender ratios in the data set analysed in this monograph and seek to relate this to known features of the various educational systems.

A note on male over-representation and social disadvantage

The review has been virtually silent on the issue of gender differences in those receiving additional resources because of social or economic advantages. Some biasing factors may be relevant here, for example the greater value placed in some societies on the education of males could play out as a bias toward the giving of additional resources to males rather than females from disadvantaged backgrounds, or the possible greater likelihood of exclusion of disadvantaged girls from the educational system. Also, to the extent that students from disadvantaged backgrounds may also have disabilities, or show behavioural, learning or emotional difficulties, the factors associated with male over-representation in these categories may influence gender ratios for disadvantaged students (depending on how any such multiple categorisation is accounted for).

Overall discussion on factors underlying male over-representation

It appears probable that "biology", "behaviour" and "bias" all play some part in the consistent finding that more males than females receive additional resources for disabilities or learning difficulties. A succinct summary is provided by Skårbrevik (2002):

> The preponderance of boys in special education might … be seen as a result of an interaction between genetically or biologically determined factors and a pedagogy which does not meet the educational needs of male students (p. 105).

The data on gender ratios in the 2003 data collection exercise, discussed and analysed in Chapter 5, are reviewed in the next section to determine the extent to which they might throw light on the underlying factors or mechanisms which may explain consistencies and variability in the data.

Main findings on disproportionality from the data base

The potential of the EQ data bases

The successive use of the Electronic Questionnaire (EQ) in a series of data collection exercises over a number of years potentially provides a rich, multi-faceted data base permitting the teasing out of the possible operation, singly or in combination, of the various factors or mechanisms discussed in the previous section of this chapter.

There is a range of comparisons within the data base which would help to indicate whether or not particular mechanisms are operative (or inoperative). For example:

- Research data on gender differences in the incidence or prevalence of specific disabilities would point to the likelihood of corresponding imbalances in the relative numbers of males and females given additional resources in educational settings in the data sets. If such imbalances do not occur, or occur in some countries but not others, this points to the operation of one or more other mechanisms.
- Conversely, research data on the *lack of gender differences* in the incidence or prevalence of specific disabilities suggests that there should not be any imbalances in the relative numbers of males and females given additional resources in educational settings in the data sets. If such imbalances do occur, or occur in some countries but not others, this points to the operation of one or more other mechanisms.
- Particular mechanisms appear likely to have differential effects on students categorised as having disabilities, difficulties, or disadvantages. For example, the suggestion that males and females are differentially susceptible to learning or behaviour difficulties in schools while self-evidently likely to be operative in students being given additional resources due to learning or behaviour difficulties, would appear likely to be less salient in leading to students receiving additional resources due to disabilities.
- Some mechanisms appear more likely to be operative at particular stages of education. For example, an increased emphasis on academic learning would perhaps be less likely to be operative at pre-school learning; nor would the possible mechanism of increased feminisation at upper secondary level.
- Some mechanisms appear less likely to be present in the educational systems of some countries rather than others. For example, the proposed factor of greater social priority to the education of males would not be likely to be operative in countries where this form of gender bias is either illegal or culturally unacceptable.

In addition to within database comparisons, the linkage of these data with other existing data, both from the OECD and elsewhere, provides an additional approach to testing the operation of different factors. For example, to the extent that the "feminisation" of primary schools is an important factor in the over-representation of boys in the identification of behavioural and other difficulties in schools, one might expect a positive correlation between the percentage of female teachers (acting as a proxy for feminisation) and the extent of male over-representation. With a series of data points for successive data collection exercises, an increase in male over-representation linked to increasing proportions of female teachers would further strengthen the conclusion.

A third basis for analysis might look at comparisons between features of the data base and specific features of national systems. The different national legal frameworks within which decisions are made about the allocation of additional resources for students with disabilities, difficulties or disadvantages may well influence some aspects of the gender disproportionality found virtually universally. At a more specific level, the detailed definitions of national categories (see Table 2.1) could have similar effects.

More generally, local knowledge of the actual way in which identification and referral systems operate provides a further analytical tool for understanding the mechanisms underlying male over-representation. This is particularly important for apparent anomalies (*e.g.* where the male/female ratio for a country is particularly high, or low, for no obvious reason; or where a specific data point for a particular national category, or for a particular level of education appears atypical – again without apparent reason). In decentralised systems, where decisions about the allocation of additional resources are made locally, perhaps at school level, it might be expected that there is greater variability in any over-representation of males, and the extent to which this does, or does not, occur is of interest.

The actuality of the current databases

At the present time the types of detailed analysis discussed in the previous section appear premature. The relatively small number of countries able to provide gender data (particularly in the 2003 data collection), and the many gaps in the data base of those able to provide data severely restricts possible detailed analyses. Some countries are able to provide data on the relative numbers of males and females over different age ranges as shown in Figures 5.3a to 5.4, but the fact that these data are aggregated across cross-national categories A, B and C makes interpretation of gender ratios difficult (a difference associated with one cross-national category would be likely to be interpreted differently for one associated with a different cross-national category).

The general findings from the available data relating to students with disabilities, learning or behavioural difficulties and social disadvantages are as follows:

Disabilities

- As reported in Chapter 5, the male/female ratio for students with disabilities (*i.e.* those in cross-national category A) is typically just above 60/40 in the 2003 data collection exercise. This replicates the finding in previous data collection exercises and is in line with previous research findings.
- As presented in Table 5.7, the median ratio is relatively constant across settings – 61% for special schools, 59% for special classes, 64% regular classes (see also Figure 5.2). The special schools ratio remains constant across educational levels. There is some indication that special class ratios are lower at secondary levels, and that regular class ratios are

somewhat higher at upper secondary. However, there are few data points and the countries represented vary from level to level making interpretations highly risky.

- A similar picture appears when the analysis is based on specific disabilities. Table 8.3 shows, as an example, the male percentages found for students receiving additional resources due to deafness or hearing impairment (median figure 58% with little variability across the fifteen countries presenting data).

Table 8.3. **Gender ratios of students receiving additional resources for disability (deaf or hearing impaired) compulsory education, public and private schools, 2003 (Table values are percentage of males)**

Austria	61.77
Belgium (Fl.)	71.07
Belgium (Fr.)	56.91
Czech Republic	55.98
Finland	59.59
Germany	57.99
Greece	65.88
Hungary	53.72
Japan	56.32
Mexico	56.28
Netherlands	64.49
Slovak Republic	57.14
Spain	56.60
Switzerland	65.52
Turkey	59.53

Difficulties

- As reported in Chapter 5, the male/female ratio for students with learning or behaviour difficulties (*i.e.* those in cross-national category B) is typically somewhat larger than that for disabilities, usually closer to a two-thirds/one-third split (*i.e.* 67%). This again replicates the finding in previous data collection exercises and is in line with previous research findings.
- As presented in Table 5.8, the median ratio is relatively constant across settings – 67% for special schools, 66% for special classes, 68% regular classes (see also Figure 5.1). The special schools ratio rises consistently across levels of schooling from 64% at pre-primary to 75% at upper secondary. There is some tendency for the ratio to rise across levels of schooling for special classes and regular classes. Again there are few data points and the countries represented vary from level to level making interpretations highly risky.

Disadvantages

- The ratios for social and economic disadvantages (*i.e.* those in cross-national category C) shows greater volatility than those for the other cross-national categories (see Table 5.9) with some of the highest and lowest values found. The most striking aspect of the very sparse data available is illustrated in Figure 5.2 Ratios for regular classes and special classes are close to equal representation of males and females (51% and 54% respectively); those for special schools show a strong male over-representation (68%). Again the pattern is similar to that found in the previous data collection although slightly more extreme.

The limited interpretation which it appears sensible to indulge in at the present time is:

- The evidential base for the involvement of "behaviour" or "bias" factors for students with additional resources for disabilities is currently very weak. The pattern obtained suggests strongly the operation of "biology" mechanisms in the male over-representation found.
- The greater male over-representation consistently found for students with additional resources for difficulties suggests the operation of mechanisms additional to, or other than, biological or genetic. It is not possible to determine whether this represents the operation of "behaviour" factors or "bias" factors (or both), given the present data base.
- The close approximation to a 50/50 split for students given additional resources for disadvantages and educated in mainstream schools (whether in regular classes or special classes) suggest there is little or no involvement of gender specific biological, behavioural or bias factors.
- The over-representation of male students among those given additional resources for disadvantages and educated in special schools suggests the operation of one or more of the biology, behaviour or bias factors. Further elucidation of which factor(s) are likely to be involved is called for and will require local knowledge of the situation.

Conclusions

The fact that relatively few countries are able to provide adequate data covering the variables targeted in the EQ inhibits conclusions beyond the limited and general set listed in the previous section. There are indications that more countries are proposing to collect data by gender, a proposal put forward for the United States by Oswald *et al.* (2003).

A more extensive data base would permit exploratory sub-group and other analyses to establish whether the pattern of variation in gender ratios can be understood as a function of the differential operation of the mechanisms or factors arising from the research literature discussed in this chapter, buttressed by local knowledge and understanding of aspects not revealed by the questionnaire data (and of additional mechanisms which exploration of the data suggest). It is appreciated that we are dealing with a complex situation where particular data are likely to be determined by the operation and inter-operation of multiple mechanisms, and that simple single factor solutions are unlikely.

Experience from the set of data collection exercises using the EQ now suggests that an alternative methodology will have to be employed to achieve this goal. One way forward would be to build directly on the local data gathering exercises being piloted in several countries. An alternative or complementary approach would be to have a somewhat modified version of the EQ which was completed at local level.

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Chapter 9

Further Discussion of Significant Issues

This chapter draws together the main outcomes presented in the monograph. It analyses cross-national categories A, B and C separately and discusses their policy implications. A final section reviews the experience of the last rounds of data collection and in the light of this identifies needed future developments.

It is clear that countries provide substantial additional support for many students in order to help them access the curriculum. The significance of the issue is reflected in the many laws, policies and types of special education provision developed to meet these students' educational needs. Factors repeatedly identified by countries which serve as facilitators for or barriers to equity and inclusion include legal frameworks, funding models, assessment arrangements, school structure, class size, the use of individual teaching programmes, the involvement of additional teachers and aides, teacher training, parental involvement and co-operation with other services. Taken together, these issues present a considerable agenda for reform.

The work also shows the wide variation between countries in the conceptual frameworks that are used to classify these students. The differences are exhibited in Table 2.1 and more fully in Annex A where national definitions for each category are laid out. Apart from the inherent interest in the different models used in countries, the tables immediately show the difficulties in making comparisons between countries for these students. Nevertheless, countries welcomed these data displays and analyses and Chapter 3 therefore provides data for those categories where there is most confidence of comparability between countries. Despite their controversial nature, these data are included to give a sense of connection with the way in which countries gather their own data.

What emerges most strongly from these data presentations are the large between-country variations in prevalence rates, and following the resources approach, this implies considerable differences in the degree of support given to individual categories of students. The substantial variations at different levels of education and degree of difference in the place of education – special school, special class or regular class – are also noteworthy.

Chapter 4 presents the data broken down by cross-national categories A, B and C for students with disabilities, difficulties and disadvantages. This procedure allows for all national variations in the concept of special education and definitions in use to be taken into account. It has the effect of smoothing the data to some extent to improve comparability.

Issues arising from the analyses of the cross-national category A, B and C data

The discussion of this part of the analysis is expressed in terms of a set of questions followed by a set of tentative answers and policy action implications. The discussion applies equally to the data presented in Chapter 3, which are used to elaborate answers where relevant. It needs to be emphasised that every effort has been made to ensure that the classification of national data into the cross-national categories of A, B and C is valid and reliable. The classifications provided have been agreed at meetings of national representatives and while the possibility remains that errors exist they are assumed to be minimal.

1. Why does the percentage of students receiving additional resources for disabilities, difficulties and disadvantages differ from country to country?

When the number of students receiving additional resources for disabilities, difficulties and disadvantages is expressed as a percentage of all students there is considerable country to country variation. The range for disabilities is from below 1% to above 5% in compulsory education and is even wider for other phases of education. In terms of difficulties, the range is from 0% (in Japan, which does not have any national categories under CNC B) to over 20% in Finland. Finally, for disadvantages, countries range between less than 1% to over 30% in the proportions of students receiving additional resources in compulsory education, while four countries – Austria, Germany, Greece, and the United Kingdom (England) – have no national categories under CNC C. Suggestions as to possible factors or mechanisms underlying these differences follow with a commentary. There is, of course, no suggestion that a single factor or mechanism is involved.

- *Differences reflect differential incidence or prevalence of disabilities, difficulties or disadvantages.* While such a possibility cannot be discounted, it is perhaps best addressed at the level of specific disabilities or difficulties, such as blindness. It is clear that there are large between-country variations in prevalences in individual disability categories.
- *Some countries provide additional resources for disabilities, difficulties and disadvantages which are not so resourced in other countries.* Inspection of Table 2.1 in Chapter 4 and Annex A reveal the difficulties involved in assessing this possibility. The number, labelling and definition of categories of disability, difficulties and disadvantages vary widely from country to country in a manner which obscures any linkage with overall proportions of students given additional resources.
- *Some countries do not provide additional resources for disabilities, difficulties and disadvantages at particular phases of education.* Thus the Netherlands and Turkey appear not to provide additional resources for disabilities at pre-primary level.
- *Differences reflect policy differences.* Some countries, for instance for reasons of equity, may make the additional resources for students with disabilities, difficulties or disadvantages an educational priority. Note that this is not a simple question of the relative wealth of countries. The very high United Kingdom (England) percentage at pre-primary and upper secondary (relative both to other countries, and to United Kingdom (England) percentages for the middle years of schooling) may well represent policy considerations.
- *Some countries' regular systems deal better with individual differences and minimise the need for differentiation.*
- *Particularly with regard to the variation in cross-national category C, it is possible that the basis for computing student numbers involved may differ from that in cross-national category A or B.* Numbers of students receiving additional resources in these last two categories are typically based on head-counts. All such students need these resources to access the regular curriculum. Numbers of students with social and other disadvantages may be computed on a group or class basis where the resources are provided for all falling within that classification irrespective of the needs of specific individuals. In these circumstances an inflated figure (compared with that for disabilities or difficulties) may be produced.
- *With regard again to cross-national category C, one possibility is that numbers of migrants and others requiring additional resources because of linguistic problems differ from country to country.* Second language learning is an important component of the additional resources provided in countries with significant immigration but not for other countries.

2. Why do some countries educate virtually all students receiving additional resources for disabilities, difficulties and disadvantages in regular classes with other students, while other countries educate virtually all of them in special schools?

Inspection of the relevant charts in Chapter 4 shows that while, for example, Spain educates virtually all students receiving additional resources for disabilities, difficulties and disadvantages in regular classes, several other countries educate over 80% of them in segregated special schools; in Chile, all students with disabilities and in Belgium (French Community), all students with difficulties are placed in special schools in compulsory education. However, a majority of countries operate a form of mixed economy involving substantial use of regular classrooms together with special schools and/or special classes.

- *Differences reflect policy differences*. It appears highly likely that inclusion or segregation is a matter of national policy in contrast, for instance, to being a parental decision.
- *There are features of mainstream schools and their curriculum, and the attitudes of their teachers, which facilitate or obstruct integration*. Study of these features is a priority.
- *There are features of special schools, and of other segregated provision, which are viewed as desirable by educators and parents*. Study of these features is also a priority.

3. Why do some countries have no national categories falling within cross-national category C (i.e. they appear not to be providing additional resources for students with disadvantages)?

Some countries (Austria, Germany, Greece and the United Kingdom [England]) have no national categories falling within cross-national category C. Interpretation of this fact is problematic with possibilities including:

- *The curriculum is such that students with social disadvantages have no particular problems in accessing it*.
- *The social system is such that no students are disadvantaged to the extent that they have problems in accessing the regular curriculum*. While these possibilities appear close to utopian, it would be of great interest if any countries making either or both of these claims could explain how their educational and/or social systems effectively eliminate social disadvantage affecting access to the regular curriculum.
- *Students have disadvantages but additional resources are not provided*. If this explanation is put forward, it is again reasonable to request a rationale. Note that if there are national categories of disadvantages for which no additional resources are provided, they are expected to have been declared in the data collection exercise (and further declared as falling outside the resources definition).
- *Students have disadvantages and additional resources are provided but relevant data are not available to data providers*. If this is the case, the expectation is that appropriate categories falling within C are declared in the data collection exercise and coded as "data not available". This provides a flag that the data are out there somewhere and indicates that a different methodology of data collection (perhaps more locally based) may have to be employed. Alternatively, the data may be collected by some other agency than that directly responsible for the provision of data, calling for cross-agency liaison.
- *Countries are not prepared to declare national categories falling within C for educational, political or other reasons*. Such possibilities are again recognised and respected. However, the data collection exercise is not dependent on the existence of national categories. If it is

accepted that students have disadvantages in gaining access to the regular curriculum and additional resources are made available to support such students, it would be expected that some form of classification would be adopted to either allocate, or account for, such resources.

4. Why does the percentage of students receiving additional resources for disadvantages differ more widely from country to country than for disabilities?

The range for disadvantages is typically from 0% to above 10% for all phases of education apart from upper secondary (compared to about half this range with disabilities).

- *Some countries which do provide additional resources for disadvantages do so for large percentages of students*. When combined with the fact that some countries have no cross-national category C provision this results in large ranges across countries. Factors possibly underlying this are discussed below.
- *The basis for computing student numbers involved may differ from that in cross-national category A*. As discussed earlier in the chapter, numbers of students receiving additional resources for disabilities (and also for difficulties) are typically based on head-counts. All such students need these resources to access the regular curriculum. Numbers of students with social and other disadvantages may be computed on a group or class basis where the resources are provided for all falling within that classification irrespective of the needs of specific individuals. In these circumstances an inflated figure (compared with that for disabilities or disadvantages) may be produced.

Policy action implications

Given the increased costs of special provision for students with disabilities (at least twice that for non-disabled students, OECD, 1999), countries should carefully review how students become labelled as disabled and how decisions are made about their placement. In addition, reviews of the preparation of professionals are called for to serve as a budget neutral preventive mechanism (see OECD, 1999).

Students who generally fall into category B are those who should be able to receive their education in mainstream schools given relevant changes to the way regular schools function. The fact that many countries educate these students in special schools or classes therefore requires review. Countries also need to review carefully their decision-making procedures as well as any school-based or professional factors with regard to these students. These aspects may well lead unnecessarily to inappropriate and costly labelling. It may also be the case that there are students who fall into this category who are unidentified and may, as a result, be inadequately resourced.

The education of students from socially disadvantaged backgrounds is clearly a priority in most OECD countries. Increased levels of immigration underline this point. As for CNC A and B, reviews of whether resources are adequate and whether they are being used appropriately for CNC C students are called for. Consideration should be given to school organisation, teaching methods, teacher preparation and identification and outcomes for CNC A, B and C students.

In general terms the effective education of students in CNC A, B and C is predicated on changes in the way the education system functions for them and how education works with other services (*e.g.* OECD 1995b, OECD 1996, OECD 1998). Greater attention should be given at a holistic level to the issues identified above.

5. *Why are more males than females receiving additional resources to help them access the curriculum?*

The findings reported in the earlier monographs (OECD 2000, OECD 2005) concerning gender are fully replicated here. Breakdowns of gender by country, by location and level of education (pre-primary, primary, lower secondary and upper secondary) reveal that except in a few cases more boys than girls are receiving additional resources to access the curriculum. For those with disabilities, the median percentage of males ranges from 59% to 64% depending on location; for those with difficulties the median is approximately 67%, while for disadvantages the range is wider between 51% and 68%. Chapter 8 discusses these findings in the context of the "three Bs" hypothesis, *i.e.* in terms of biological, behavioural and bias factors. The following are only tentative conclusions based on the rather limited data available:

- It appears more likely that the male overrepresentation of students with disabilities is due to biological rather than behavioural or bias factors.
- In the case of students with difficulties, it would appear that factors other than, or additional to, biological ones are responsible for the male preponderance in numbers receiving additional resources.
- As the male/female ratio of students receiving additional resources because of disadvantages in regular and special schools was almost 50/50, it appears that no biological, behavioural or bias factors are involved. The percentage of male students with disadvantages receiving additional resources in special schools, however, is 68% and suggests that one or more of the three factors is at play, although it is not clear at this stage which of the three factors would explain most of the variance.

Policy action implications

The fact that in most countries there are substantially more males than females receiving additional resources to help them access the curriculum needs reviewing on the following counts:

- More research and data need to be made available in order to clarify which mechanisms are involved in the overrepresentation of male students with difficulties in all settings and of those with disadvantages in special schools. Local knowledge of the situation will almost certainly be necessary to achieve this.
- If bias is found to operate, it will be necessary to establish what aspects of students' identification weigh decisions in favour of males and whether certain features of school functioning and decision-making exacerbate problems thus bringing them to the attention of the "authorities".

6. *What can we learn from the inclusion of students with disabilities, difficulties and disadvantages in PISA 2003?*

PISA 2003 identified for the first time students with special educational needs classifying them in the Student Tracking Form into one of the following four categories: functional disability, intellectual disability, limited test language proficiency, and other. 3 767 students out of a total of 272 398 taking part in the assessment were classified as having special educational needs. In other words only 1.37% of the PISA sample was classified as having special needs; in addition, five OECD member countries did not include any SEN students in the assessment programme. On average, students with SEN scored

fifty or more points below typical students in all three areas assessed in PISA: reading, mathematics and problem solving. Some students with SEN, however, scored at the highest levels in all three areas assessed.

Policy action implications

It is interesting that many DDD students were able to complete the PISA tests and that some fared extremely well. In fact, on average even the students with intellectual disability were scoring as well as some non-DDD students from the lowest scoring countries in the PISA 2003 data round. This finding implies that probably many more DDD students can be included in the PISA sampling frame than previously thought. The inclusion of these students in future rounds of PISA requires preliminary empirical work investigating the implications of their inclusion from a psychometric point of view. A study investigating this issue is currently being planned by OECD/CERI.

It is also interesting to note the gender split of approximately three males to two females in special education, as reported earlier in this monograph. This contrasts to the roughly 50/50 ratio for non-SEN students. This finding strengthens the gender difference conclusion discussed earlier and suggests the need for further research into why there are so many more boys being provided with special provision in contrast to girls across so many different cultures and education systems.

PISA is to be commended for including the SEN code on the Student Tracking Form. It represents a good step forward in acknowledging the existence of DDD students and their right to be included in the test. However, allowing the countries to define how they will use the four broad categories of special educational needs results in wide discrepancies in student ability under the seemingly same educational label. In addition, the use of national definitions makes generalisation of the categories across countries problematic. To facilitate more precision in testing and the interpretation of the results, one solution would be for PISA to adopt the standardised definitions for special educational needs that have been developed by OECD/CERI, as described at the outset of this book. Coordination between the PISA national managers and the CERI national advisers might facilitate this process.

7. Why is there an increasing trend overall in the percentages of students with disabilities, difficulties and disadvantages receiving additional resources?

We saw in Chapter 6 that in many countries where data are available there seems to be an increase in the percentages of DDD students receiving additional resources in the period 1999 – 2003. This is the first time that data on trends are being published and large gaps still exist; any interpretations or conclusions drawn should therefore be done with caution. We hope that this aspect of the work will form a larger focus of future publications with the expansion of the trend database.

There is a genuine increase in the incidence of certain types of disabilities, difficulties and disadvantages. It is possible that this may be the case at least in certain types of disability. For example, increases in the prevalence of autism have been recently reported in the research literature (*e.g.* Baird *et al.*, 2006) and the data from the Electronic Questionnaire (EQ) reported in the monograph seem to reflect this increasing trend.

The increase reflects new policies giving greater priority to these students by making available more resources to enable them to access the curriculum. Some countries have increased over the

years the resources made available to students with disabilities, difficulties and disadvantages. Policies in the United Kingdom (England) for example have recently focused on early diagnosis and intervention, reflected in the increase in the percentage of children receiving additional resources at pre-primary level.

The increase reflects methodological differences in collecting and reporting the data. In some cases countries have changed the way they have been collecting and reporting data over the years, in an attempt to improve data quality and harmonise methods for greater comparability. Cases where it is certain that large increases (or decreases) in percentages are due to methodological reasons have been highlighted in the monograph.

Limitations of current methodology

It is worth pointing out once more that, despite the utility of the EQ and that of extending the data requests beyond the central years of schooling, the majority of countries taking part in this exercise have been unable to provide much of the data requested. The general conclusions of the first data collection exercise in this respect still stand – data availability for students with disabilities in segregated settings (particularly in special schools) is high; data availability for students receiving additional resources in integrated settings is very low. There have been improvements from the first exercise, particularly in relation to the availability of data on CNC B and C (difficulties and disadvantages respectively). And through successive iterations, previous anomalies in the allocation of national categories to B and C have been largely removed.

Need for use of EQ at school and/or other sub-national levels

It appears very clear that an alternative methodology is called for. The obvious solution is what has been termed the "School Level Questionnaire"; *i.e.* a version of the EQ where data are collected at school level. This is attractive as it should not be difficult at the level of the individual school to provide data on students receiving additional resources, but it does present other problems (*e.g.* sampling issues; ensuring that local data providers understand the task). It may be that for different countries, the optimum solution to the data gathering task is by an exercise based not on individual schools but on a local administrative area or a wider region of the country. Trials of this approach have been encouraging and it appears a matter of priority for proposals to be formulated and agreed to, in order to implement this more generally.

Extending collection of data on student gender

The earlier finding of an over-representation of males amongst students receiving additional resources is fully replicated. There are indications of systematic differences in the degree of over-representation, which give considerable promise in the attempt to interpret what lies behind this apparently inequitable distribution of resources.

However, the data coverage is currently insufficient to make trustworthy comparisons. Given the importance of this issue, and the relatively minor changes needed to collect data for males and females separately where total student numbers are currently collected, a clear priority exists for counties to make serious attempts to implement this in the next data collection exercise.

Modifications to the EQ

Need for continuity. It is taken as axiomatic that modifications to the type and form of data collected in the various data collection tables should be minimal. This is in part to avoid complicating and changing the task of data providers with their hard-won experience of completing the present EQ. It is also highly desirable that successive uses of the EQ help to build up comparable longitudinal data so that trends and changes can be examined.

Possible removal of areas with poor data yields. Issues of continuity should not preclude removal of parts of the EQ, particularly where it is clear that the approach of obtaining a central national response leads to poor data yields, as discussed above. However, it would appear to be a step backwards to do this without setting in train the use of a different methodology (such as the School level EQ) to provide an alternative route to collecting the required data.

Further efforts to obtain data on resources. A further problematic area with low yields is data on teachers. This is a valuable partial proxy for resources and it appears sensible to continue efforts to obtain these data. This may be another area where a separate exercise is called for, with the aim of extending the call for data to cover other professional and support staff as well as teachers (possibly as part of a wider initiative on the specification of resources).

Inclusion of post-school phase. Possible additions to the EQ include extending the range to include post-school tertiary education. Arguments for and against this are finely balanced. This aspect of education for students with disabilities, difficulties, and disadvantages is of considerable importance. However, experience suggests the likely difficulty of getting worthwhile amounts of data using the EQ and it may be that a different, separate exercise is again called for.

Age distribution data. A further possible addition might be to call for separate data on CNC A, B, and C in Table 6 on age distributions. Suggestions that misleading pictures were being presented when data on the three cross-national categories are combined led to their separate presentation in this monograph and it would be consistent to also do this for age distributions.

Final comments

The data gathered so far have been determined by what countries have available. Clearly this is an important starting point essential for the development of international comparisons. However, what are also missing are economic data and data on outcomes for students with disabilities, difficulties and disadvantages. This latter element is an important omission and in need of correction. Future data gathering exercises will in addition focus on collecting outcome data. From the academic perspective, PISA holds many possibilities and the work presented in this monograph is a first step towards the goal of including more DDD students in future rounds of PISA. However, for these students other outcome variables are important. These include access to the labour market, entry into further or higher education and keeping away from criminality. OECD/CERI has just started a new study that aims to examine in depth issues of transition of DDD students into further and higher education and the labour market.

This monograph is a considerable elaboration of that published in 2005. Nevertheless, there are still many significant omissions and there is a need for further development. However, even if exact international comparability has not been attained there are still

many substantial differences between country provision that are unlikely to be due to measurement error. These differences (*e.g.* the extent of school inclusion) have potentially large impacts on the futures of individual children and the attainment of equity. They need to be closely addressed to enable the education system to play its full role in increasing social cohesion and contributing even more significantly to national economies.

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Policies, Statistics and Indicators
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ANNEX A

Distribution of Individual National Categories into 22 General Categories used to Describe Students with Disabilities, Difficulties and Disadvantages

	Visual impairment	Blindness	Hearing impairment	Deafness	Emotional, behavioural difficulties	Severe learning problems	Moderate learning problems	Light learning problems	Physical disabilities	Combinatorial disabilities	Specific learning difficulties	Speech and language problems	Hospital	Other health problems	Autism	Gifted and talented students	Remedial help	2nd language and mother tongue teaching	Travelling children	Disadvantaged students	Aboriginal and indigenous students	Young offenders
Austria	5x	5x	4x	4x	6	7			2		1,9	3	8									
Belgium (Fl.)	6x	6x	7x	7x	3	2x	2x	1	4		8, 11		5	9			10	12x, 13,16, 17	14	12x		15
Belgium (Fr.)	6x	6x	7x	7x	3	2x	2x	1	4		8		5					11x		11x, 10, 12		9
Czech Rep.	3x	3x	2x	2x	8x	1x	1x		5	6	8x	4	7	9, 10	12					11		
Finland	4x	4x	3x	3x	6, 14	2x	2x	1	5		8, 11, 12	10	18	9	7		13, 15, 17	16				
Germany	2x	2x	3x	3x	7	6x	6x		5	9	1	4	8	11			10					
Greece	1x	1x	2x	2x	6x	4x	4x	6x	3	7, 5x	6x	6x			5x			8x		8x		
Hungary	2x	2x	3x	3x	9x	1			4	6	7, 9x	8		9x	5		9x			10		
Japan	1x	1x	2x	2x	7	3x	3x	3x	4			6	5					8				
Luxembourg	3x	3x	3x	3x	2	1x	1x	1x	4		6	3x						5x		5x		
Mexico	6	2	1	4	5		3x	3x	3x	6	7	8					9		11x	13	11x, 10	12
Netherlands	5	4x	4x	2	1	7x, 910	8x	8x	13x	5	11	7x, 13x	3		6				12x		12x	
Slovak Rep.	2x	2x	1x	1x	9, 10x	6	5		3	11	8	4	12		7					13		10x
Spain	3x	3x	1x	1x	5	4x	4x	4x	2	6	11		9			7	12		10	8		
Switzerland	16x	16x	14x	14x	1, 3, 4	9x, 10x	9x, 10x		12, 6	11, 18	1, 2, 3	7, 15	8, 17	19				5				
Turkey	1x	1x	2x	2x	11	5, 9	4		3		10	6	8		13	7		12x		12x		
United States	3x	3x	10x	10x	4	1x, 12x	1x, 12x	13	5	8, 9	7	2		6	11					14		

Note: Matrix of 22 national categories covering students provided with additional resources to access the curriculum, by country. Since not all countries use all categories there are many empty cells. The number in each cell refers to the number of that category for that particular country as given in Table 2.2. The "x" indicates that the category includes children from one or more of the other 22 categories and therefore on its own makes it non-comparable with a category containing only those children.

ANNEX B

Data Availability Table

Cross-national category A

	Special schools					Special classes					Regular classes				
	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education
Austria	✓	m	✓	✓	a	x	x	x	x	x	✓	m	m	m	m
Belgium (Fr.)	✓	✓	✓	✓	✓	a	a	a	a	a	m	m	m	m	m
Belgium (Fl.)	✓	✓	✓	✓	✓	a	a	a	a	a	✓	✓	✓	✓	x
Czech Republic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Finland	✓	✓	✓	✓	✓	x	x	x	✓	✓	✓	✓	✓	✓	✓
Germany	✓	a	x	x	x	x	x	x	x	✓	✓	n	✓	✓	✓
Greece	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	m	m	m	m	m
Hungary	✓	✓	✓	✓	n	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Japan	✓	✓	✓	✓	✓	✓	a	✓	n	✓	✓	a	✓	✓	a
Luxembourg	✓	✓	✓	✓	✓	n	n	n	n	n	m	m	m	m	m
Mexico	✓	✓	✓	✓	n	a	a	a	a	a	✓	✓	✓	✓	m
Netherlands	✓	x	✓	m	m	a	a	a	a	a	✓	✓	✓	m	m
Slovak Republic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Spain	✓	✓	✓	✓	✓	x	x	x	x	a	✓	✓	✓	✓	✓
Switzerland		a	x	x	a	a	a	a	a	a	m	a	m	m	a
Turkey	✓	m	✓	a	✓	✓	a	✓	a	a	m	m	m	a	m
United Kingdom	✓	✓	✓	✓	✓	x	x	x	x	x	✓	✓	✓	✓	✓
United States	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Cross-national category B

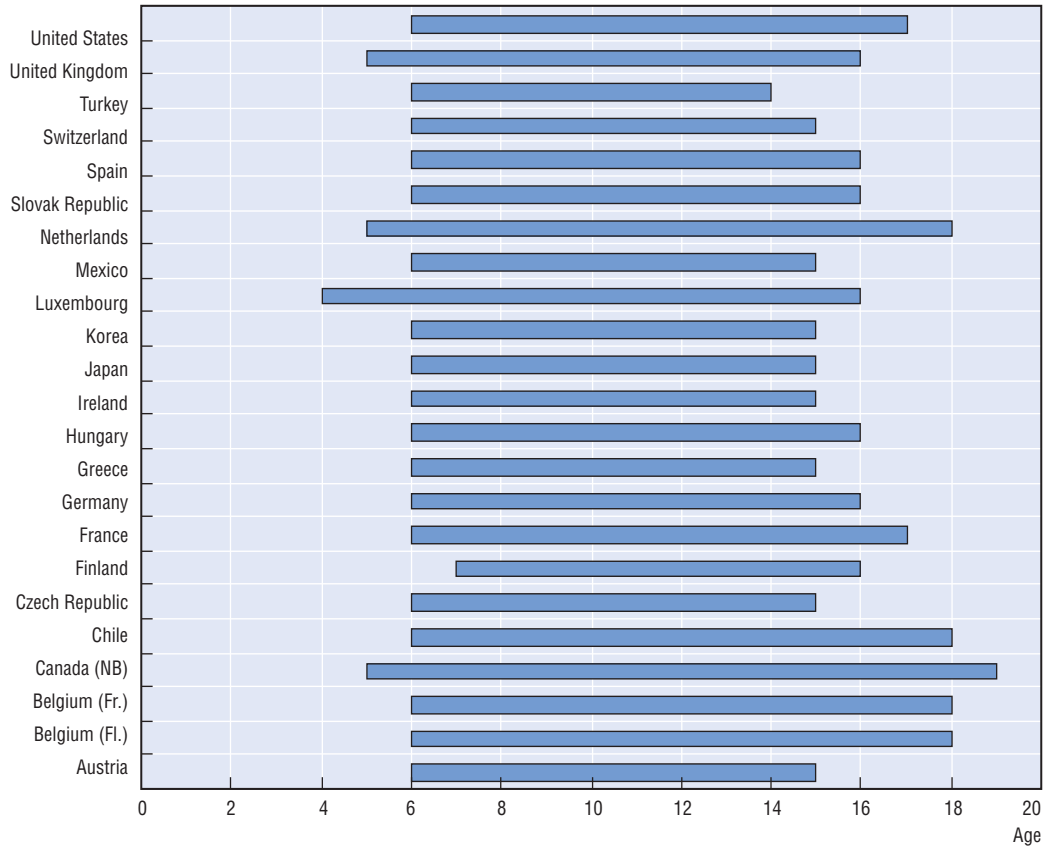
	Special schools					Special classes					Regular classes				
	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education
Austria	✓	m	✓	✓	a	x	x	x	x	x	✓	m	m	m	m
Belgium (Fr.)	✓	✓	✓	✓	✓	a	a	a	a	a	m	m	m	m	m
Belgium (Fl.)	✓	✓	✓	✓	✓	a	a	a	a	a	✓	✓	✓	✓	x
Czech Republic	✓	✓	✓	✓	a	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Finland	✓	✓	✓	✓	✓	x	x	x	x	✓	✓	✓	✓	✓	✓
Germany	✓	✓	x	x	x	x	x	x	x	x	✓	n	✓	✓	✓
Greece	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	m	m	m	m	m
Hungary	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Japan	a	a	a	a	a	a	a	a	a	a	✓	a	✓	✓	a
Luxembourg	✓	✓	✓	✓	✓	n	n	✓	n	n	m	m	m	m	m
Mexico	✓	✓	✓	✓	n	a	a	a	a	a	✓	✓	✓	✓	m
Netherlands	✓	x	✓	m	x	✓	m	m	✓	m	✓	✓	✓	m	m
Slovak Republic	✓	✓	✓	✓	a	✓	✓	✓	✓	a	✓	✓	✓	✓	✓
Spain	a	a	a	a	a	a	a	a	a	a	✓	✓	✓	✓	✓
Switzerland	a	a	x	x	a	✓	a	x	x	a	m	a	m	m	a
Turkey	✓	m	✓	a	✓	a	a	a	a	a	m	m	m	a	m
United Kingdom	✓	✓	✓	✓	✓	x	x	x	x	x	✓	✓	✓	✓	✓
United States	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Cross-national category C

	Special schools					Special classes					Regular classes				
	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education
Austria	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
Belgium (Fr.)	a	a	a	a	a	m	m	m	✓	a	m	m	m	m	m
Belgium (Fl.)	a	a	a	a	a	✓	a	✓	✓	a	✓	✓	✓	✓	✓
Czech Republic	✓	✓	✓	✓	✓	a	✓	a	a	a	m	m	m	m	m
Finland	a	a	a	a	a	a	a	a	a	a	m	m	m	m	m
Germany	a	a	a	a	a	x	x	x	x	x	a	a	a	a	a
Greece	a	a	a	a	a	n	n	n	n	n	m	m	m	m	m
Hungary	a	a	a	a	a	a	a	a	a	a	✓	a	a	a	a
Japan	a	a	a	a	a	a	a	a	a	a	m	a	m	m	m
Luxembourg	a	a	a	a	a	n	n	✓	n	n	a	a	a	a	a
Mexico	✓	✓	✓	✓	n	a	a	a	a	a	✓	✓	✓	✓	n
Netherlands	✓	x	✓	✓	x	✓	m	m	✓	x	✓	x	✓	✓	x
Slovak Republic	✓	✓	✓	✓	✓	✓	a	✓	x	a	a	a	a	a	a
Spain	a	a	a	a	a	a	a	a	a	✓	✓	✓	✓	✓	n
Switzerland	a	a	a	a	a	✓	a	x	x	a	m	m	m	m	a
Turkey	m	a	m	a	a	a	a	a	a	a	m	m	m	a	m
United Kingdom	m	m	m	m	m	a	a	a	a	a	a	a	a	a	✓
United States	✓	✓	✓	✓	✓	m	m	m	m	m	m	m	m	m	m

ANNEX C

Compulsory School Education



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ANNEX D

Data by Level of Education

Numbers of students with visual impairment and blindness as a percentage of all students

	Special schools					Special classes					Regular classes				
	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education
Austria	0.0208	m	0.0171	0.0277	a	x	x	x	x	x	0.0397	m	m	m	m
Belgium (Fr.)	0.0318	0.013	0.0244	0.0803	0.017	a	a	a	a	a	m	m	m	m	m
Belgium (Fl.)	0.0421	0.0168	0.0295	0.0161	0.0752	a	a	a	a	a	0.0306	0.034	0.0318	0.0805	xr:a7
Czech Republic	0.0571	0.0972	0.0538	0.0607	0.059	0.0028	0.0592	0.004	0.0014	n	0.0483	0.0303	0.0482	0.0482	0.0163
Finland	0.01	0.0015	0.0059	0.0182	0.0327	x	x	x	x	0.0004	0.0388	0.0065	0.04	0.0343	0.0056
Germany	0.0436	x	x	x	x	x	x	x	x	x	0.0161	n	0.0268	0.0138	0.0019
Greece	0.0061	0.007	0.0078	0.000	0.000	0.009	0.0021	0.0098	0.0064	0	m	m	m	m	m
Hungary	0.0161	0.0048	0.0185	0.0283	n	n	n	n	n	n	0.0152	0.0247	0.0175	0.0121	0.0129
Japan	0.0104	0.0154	0.0088	0.0135	0.0639	0.0021	a	0.0025	0.0014	n	0.0015	m	0.0021	0.0003	m
Mexico	0.0273	0.013	0.0371	0.0067	a	a	a	a	a	a	0.0122	0.0062	0.0157	0.0022	m
Netherlands	0.0279	x	0.0315	0.0143	x	m	m	m	m	m	0.0408	xr:a4	0.0349	0.0306	xr:a7
Slovak Republic	0.0232	0.0091	0.0233	0.0276	0.0301	0.0022	0.1038	0.003	0.0021	0.0256	0.0304	0.0542	0.0378	0.0289	0.0107
Spain	0.0038	0.0013	0.0067	0.0042	a	m	m	m	m	a	0.0449	0.0329	0.048	0.0408	0.0235
Turkey	0.0119	m	0.0119	a	a	0.0022	a	0.0022	a	a	0.0085	0.0012	0.0085	a	0.0076
United States	0.0055	0.0037	0.006	0.0061	0.0109	0.0166	0.0226	0.0204	0.0145	0.0153	0.0271	0.0122	0.0336	0.023	0.019

Numbers of students with hearing impairment and deafness as a percentage of all students

	Special schools					Special classes					Regular classes				
	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education
Austria	0.074	m	0.0934	0.0674	a	x	x	x	x	x	0.0656	m	m	m	m
Belgium (Fr.)	0.0722	0.0714	0.0931	0.0959	0.0311	a	a	a	a	a	m	m	m	m	m
Belgium (Fl.)	0.108	0.1109	0.1173	0.1133	0.0872	a	a	a	a	a	0.0688	0.0617	0.0756	0.1687	xr:a7
Czech Republic	0.0867	0.0408	0.0972	0.075	0.0753	0.0028	n	0.0014	0.0014	0.0012	0.0487	0.0275	0.0478	0.0496	0.0226
Finland	0.041	0.0189	0.0356	0.0411	0.0186	x	x	x	x	0.0025	0.029	0.0196	0.0321	0.0104	0.0253
Germany	0.0979	m	m	m	m	x	x	x	x	x	0.0293	n	0.0503	0.027	0.0012
Greece	0.0339	0.0246	0.0311	0.0214	0.007	0.0148	0.0049	0.015	0.012	0.0003	m	m	m	m	m
Hungary	0.0545	0.0317	0.0781	0.0815	n	0.0008	n	n	n	0.002	0.029	0.0353	0.0274	0.0229	0.03
Japan	0.0296	0.0811	0.0288	0.0311	0.0522	0.0104	a	0.0111	0.0091	n	0.0143	m	0.0186	0.0062	m
Luxembourg	0.0321	0.0422	0.0424	0.0163	n	a	a	a	a	a	0.0226	0.0127	0.029	0.0042	m
Mexico	0.1119	x	0.0874	0.1116	x	m	m	m	m	m	0.0764	x	0.0567	0.0681	xr:a7
Netherlands	0.0554	0.0881	0.0556	0.0544	0.108	0.004	0.0026	0.0059	0.0034	n	0.0344	0.0339	0.0407	0.0336	0.0087
Slovak Republic	0.0117	0.0064	0.021	0.0114	a	m	m	m	m	a	0.1214	0.1032	0.1517	0.0826	0.04
Spain	0.0594	m	0.0594	a	0.028	0.0084	a	0.0084	a	a	0.0129	0.0078	0.0129	a	0.0119
Switzerland	0.0178	0.0102	0.0196	0.019	0.0243	0.0598	0.0575	0.0723	0.0537	0.0515	0.0614	0.0242	0.076	0.0527	0.0448
Turkey	0.074	m	0.0934	0.0674	a	x	x	x	x	x	0.0656	m	m	m	m
United Kingdom	0.0722	0.0714	0.0931	0.0959	0.0311	a	a	a	a	a	m	m	m	m	m
United States	0.108	0.1109	0.1173	0.1133	0.0872	a	a	a	a	a	0.0688	0.0617	0.0756	0.1687	xr:a7

Numbers of students with emotional and/or behavioural difficulties as a percentage of all students

	Special schools					Special classes					Regular classes				
	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education
Belgium (Fr.)	0.32	0.07	0.34	0.55	0.15	a	a	a	a	a	0.0103	n	0.0016	0.0522	x
Belgium (Fl.)	0.64	0.05	0.52	1.49	0.37	a	a	a	a	a	a	a	a	a	a
Finland	0.14	a	0.10	0.22	0.08	a	a	a	a	0.0229	1.5756	0.0646	1.0271	2.7515	0.223
Germany	0.26	m	m	m	m	x	x	x	x	x	0.1	n	0.18	0.0928	7-05
Spain	0.07	0.03	0.13	0.07	a	x	x	x	x	x	0.3062	0.1858	0.3746	0.2185	0.0383
United States	0.16	0.00	0.14	0.22	0.20	0.5048	0.0471	0.526	0.5842	0.4702	0.2678	0.0249	0.2769	0.3133	0.2627

Numbers of students with physical disabilities as a percentage of all students

	Special schools					Special classes					Regular classes				
	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education
Austria	0.1188	m	0.1137	0.1436	a	x	x	x	x	x	0.0472	m	m	m	m
Belgium (Fr.)	0.2106	0.1149	0.1983	0.5221	0.0659	a	a	a	a	a	m	m	m	m	m
Belgium (Fl.)	0.2116	0.0978	0.1918	0.5454	0.0488	a	a	a	a	a	0.0751	0.1646	0.0997	0.1365	xr:a7
Czech Republic	0.0694	0.0397	0.0854	0.0635	0.1181	0.0056	n	0.0098	0.001	n	0.1166	0.0864	0.1141	0.1172	0.0532
Finland	0.1607	0.0319	0.1642	0.141	0.1453	x	x	x	x	0.0035	0.426	0.0239	0.511	0.2627	0.0144
Germany	0.1978	m	m	m	m	x	x	x	x	x	0.0369	n	0.0719	0.0296	0.0027
Greece	0.0399	0.0415	0.0367	0.0149	0.0126	0.0157	0.0092	0.0209	0.0021	0	m	m	m	m	m
Hungary	0.0177	0.0467	0.0285	0.0235	n	0.0026	0.0072	n	n	0.0065	0.0031	0.0145	0.0032	0.0053	0.0005
Japan	0.11	0.0041	0.1061	0.1176	0.1643	0.0303	a	0.0357	0.0198	n	9 -06	m	n	3 -05	m
Mexico	0.0203	0.0544	0.0277	0.0128	n	a	a	a	a	a	0.017	0.0169	0.0222	0.0022	m
Netherlands	0.1055	xr:a4	0.0765	0.111	xr:a7	m	m	m	m	m	0.1219	xr:a4	0.1404	0.046	xr:a7
Slovak Republic	0.0323	0.0248	0.0352	0.0313	0.1589	0.0166	0.0496	0.037	0.005	0.0069	0.1291	0.1345	0.1496	0.1274	0.0401
Spain	0.0214	0.012	0.0383	0.0219	a	m	m	m	m	a	0.144	0.1929	0.1704	0.1101	0.0449
Turkey	0.0018	a	0.0018	a	0.0049	a	a	a	a	a	0.0144	0.0053	0.0144	a	0.0078
United States	0.0056	0.0075	0.0065	0.0055	0.0091	0.0699	0.0725	0.0846	0.0627	0.068	0.0687	0.0425	0.0897	0.0515	0.0431

Numbers of students with speech and language difficulties as a percentage of all students

	Special schools					Special classes					Regular classes				
	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education
Czech Republic	0.12	0.40	0.16	0.07	a	0.0082	1.0153	0.0135	0.0023	n	0.0714	0.43	0.0817	0.0598	a
Finland	a	a	a	a	a	a	a	a	a	a	3.7711	1.092	5.3152	0.0765	a
Germany	0.31	m	m	m	m	x	x	x	x	x	0.0792	n	0.2245	0.0255	0.0003
Hungary	0.04	0.04	0.10	0.03	n	0.0118	0.0317	0.0317	0.0036	n	0.0304	0.2466	0.0701	0.0166	0.0036
Japan	a	a	a	a	a	0.0109	a	0.0159	0.0013	n	0.2514	m	0.3803	0.0032	m
Netherlands	0.16	x	0.26	m	m	m	m	m	m	m	0.1239	x	0.1612	0.0234	x
Slovak Republic	0.04	0.06	0.07	0.02	a	0.0214	0.0333	0.033	0.0142	a	0.0978	0.1051	0.1104	0.1075	0.0003
Turkey	m	a	m	a	a	a	a	a	a	a	0.0179	0.0191	0.0179	a	0.005
United States	0.02	0.04	0.03	0.01	0.01	0.2859	1.577	0.4165	0.1482	0.1093	2.1159	1.8151	3.5527	0.3711	0.2546

Numbers of students in hospital as a percentage of all students

	Special schools					Special classes					Regular classes				
	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education
Austria	0.02	m	0.02	0.02	a	x	x	x	x	x	a	a	a	a	a
Belgium (Fr.)	0.05	0.06	0.05	0.14	x	a	a	a	a	a	a	a	a	a	a
Belgium (Fl.)	0.09	0.18	0.13	0.14	0.00	a	a	a	a	a	m	m	m	m	m
Czech Republic	0.52	0.81	0.56	0.49	a	a	a	a	a	a	a	a	a	a	a
Germany	0.08	m	m	m	m	x	x	x	x	x	n	n	n	n	n
Japan	0.03	0.00	0.02	0.04	0.03	0.0151	a	0.0166	0.0121	n	5 -05	m	8 -05	n	m
Slovak Republic	0.39	0.42	0.42	0.44	a	0.0025	0.0052	0.0041	0.0018	a	a	a	a	a	a
Spain	n	n	n	n	n	x	x	x	x	x	0.3058	0.3986	0.3693	0.2245	0.0343

Numbers of students with combinatorial disabilities as a percentage of all students

	Special schools					Special classes					Regular classes				
	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education
Czech Republic	0.24	0.40	0.32	0.15	0.27	0.0344	0.131	0.055	0.0113	n	0.087	0.1415	0.0881	0.0855	0.0202
Germany	0.05	m	m	m	m	x	x	x	x	x	0.0089	n	0.0231	0.0041	4 -05
Hungary	0.04	0.02	0.06	0.06	n	0.0048	0.009	0.0095	0.0049	n	0.0044	0.0214	0.0054	0.0038	0.0032
Mexico	0.02	0.04	0.03	0.01	n	a	a	a	a	a	0.2824	0.1202	0.3798	0.0144	m
Netherlands	0.22	x	0.30	0.05	x	m	m	m	m	m	0.0218	x	0.0209	0.0134	x
Slovak Republic	0.10	0.02	0.13	0.11	0.15	0.0048	a	0.0056	0.0053	a	a	a	a	a	a
Spain	0.09	0.06	0.16	0.07	a	m	m	m	m	a	0.1145	0.0883	0.1333	0.0903	0.0223
United States	0.05	0.01	0.06	0.06	0.09	0.1556	0.067	0.1894	0.1379	0.1706	0.0299	0.0286	0.0376	0.0246	0.024

Numbers of students with autism as a percentage of all students

	Special schools					Special classes					Regular classes				
	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education
Czech Republic	0.0283	0.0279	0.0431	0.0125	0.0016	0.001	0.0028	0.0019	n	n	a	0.0077	a	a	a
Finland	0.0295	0.0167	0.0311	0.0161	x	x	x	x	x	x	0.0842	0.0334	0.0952	0.0432	table 4-9
Hungary	0.0251	0.0024	0.0537	0.0208	n	0.001	0.006	0.0024	0.0006	n	0.0301	0.0751	0.0263	0.0235	0.033
Slovak Republic	0.0175	0.0033	0.037	0.0071	a	0.0007	0.0085	0.0011	0.0003	a	0.004	0.0111	0.0067	0.0029	a
Turkey	0.0025	a	0.0025	a	a	0.0032	a	0.0032	a	a	0.0039	0.0059	0.0039	a	0.0004
United States	0.0258	0.0154	0.0332	0.0202	0.0306	0.1525	0.1683	0.2168	0.0872	0.0905	0.0617	0.0676	0.0915	0.0295	0.0241

Numbers of students with severe and/or moderate learning difficulties as a percentage of all students

	Special schools					Special classes					Regular classes				
	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education
Austria	0.395	m	0.3016	0.551	a	x	x	x	x	x	m	m	m	m	m
Belgium (Fr.)	0.6282	0.1925	0.5761	1.977	a	a	a	a	a	a	a	a	a	a	a
Belgium (Fl.)	0.8301	0.4283	0.7588	2.4631	a	a	a	a	a	a	n	0.0084	n	n	n
Czech Republic	2.5552	0.1854	2.7092	2.4931	2.5417	0.1104	0.022	0.0853	0.1381	n	0.0342	0.0979	0.0404	0.0271	a
Finland	0.3949	0.2496	0.318	0.3985	0.0011	x	x	x	x	0.0123	0.3741	0.2474	0.3364	0.2981	0.0039
Germany	0.6109	m	m	m	m	x	x	x	x	x	0.0174	n	0.0364	0.0108	0
Greece	0.1614	0.0774	0.2291	0	0	0.1228	0.0521	0.159	0.0319	0	m	m	m	m	m
Hungary	0.2964	0.1477	0.3118	0.5489	n	0.019	0.019	0.0239	0.0297	0.0016	0.0046	0.0371	0.0075	0.0044	0.0014
Japan	0.2956	0.004	0.2541	0.3753	0.7974	0.4978	a	0.5017	0.4904	n	a	a	a	a	a
Mexico	0.1846	0.1802	0.2503	0.1819	n	a	a	a	a	a	0.1123	0.0461	0.1502	0.0076	m
Netherlands	0.6378	xr:a4	0.6211	0.4412	xr:a7	m	m	m	m	m	0.0178	xr:a4	0.0259	m	m
Slovak Republic	2.2444	0.2519	2.4533	2.5507	1.2079	0.3753	0.0496	0.5567	0.3192	a	0.4115	0.2572	0.7118	0.278	a
Spain	0.1697	0.0652	0.3037	0.2288	a	m	m	m	m	a	1.5642	0.4952	1.7102	1.3735	0.2882
Turkey	0.0701	a	0.0701	a	a	0.0617	a	0.0617	a	a	0.2038	0.0103	0.2038	a	0.0048
United States	0.0502	0.02	0.0482	0.0645	0.1464	0.9182	0.2073	0.9963	1.0019	1.0864	0.1317	0.0772	0.1575	0.1213	0.1344

Numbers of students with light learning difficulties as a percentage of all students

	Special schools					Special classes					Regular classes				
	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education
Belgium (Fr.)	1.60	0.00	1.15	3.67	1.15	a	a	a	a	a	a	a	a	a	a
Belgium (Fl.)	2.37	a	2.46	3.70	1.43	a	a	a	a	a	1-04	a	0.0002	n	n
Finland	0.81	0.02	0.66	1.15	0.20	x	x	x	x	0.2843	1.4131	0.029	1.1473	2.0263	0.6199
United States	0.00	0.15	0.00	a	a	0.0676	1.7132	0.1212	n	n	0.0601	0.9989	0.1077	n	n

Numbers of students with specific learning difficulties as a percentage of all students

	Special schools					Special classes					Regular classes				
	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education
Austria	0.86	a	0.53	1.31	a	x	x	x	x	x	m	a	m	m	m
Belgium (Fr.)	1.18	a	2.35	a	a	a	a	a	a	a	0.0237	a	0.0471	a	a
Belgium (Fl.)	0.93	0.00	1.95	a	a	a	a	a	a	a	a	a	a	a	a
Germany	2.06	m	x	x	x	x	x	x	x	x	0.2622	n	0.6194	0.1574	0.0001
Mexico	0.42	0.48	0.56	0.27	n	a	a	a	a	a	1.1875	0.6805	1.5843	0.0885	m
Slovak Republic	a	a	a	a	a	0.1668	0.0039	0.2074	0.1687	a	0.3663	0.0098	0.3648	0.4382	a
Spain	a	a	a	a	a	a	a	a	a	a	2.3888	1.1784	3.1131	1.465	0.0192
United States	0.05	0.00	0.04	0.08	0.08	2.8902	0.097	3.0068	3.3526	2.695	2.6023	0.0908	2.7721	2.9187	2.4122

Numbers of travelling students as a percentage of all students

	Special schools					Special classes					Regular classes				
	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education
Belgium (Fl.)	a	a	a	a	a	a	a	a	a	a	0.1988	a	a	a	a
Mexico	0.06	0.11	0.09	n	n	a	a	a	a	a	m	m	m	m	a
Spain	a	a	a	a	a	a	a	a	a	a	0.2809	0.2129	0.2956	0.2613	n

Numbers of disadvantaged students as a percentage of all students

	Special schools					Special classes					Regular classes				
	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education	Compulsory school education	Pre-primary school education	Primary or basic school education	Lower secondary school education	Upper secondary school education
Czech Republic	0.0691	0.0108	0.0373	0.1527	0.143	a	0.4143	a	a	a	m	m	m	m	m
Slovak Republic	a	a	a	a	a	0.1339	a	0.3593	x	a	a	a	a	a	a
Spain	n	n	n	n	a	m	x	x	x	a	3.1459	1.0159	4.7196	1.1472	0.0028

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Students with Disabilities, Learning Difficulties and Disadvantages

POLICIES, STATISTICS AND INDICATORS

This book provides an internationally comparable set of indicators on educational provision for students with disabilities, learning difficulties and disadvantages (DDD). It highlights the number of students involved, where they are educated – special schools, special classes or regular classes – and in what phases of education – pre-primary, primary, lower secondary and upper secondary education. It also includes information on the physical provision and on student/teacher ratios and discusses policy implications concerning special education. This new edition also presents for the first time trends in the data for students with DDD from 1999 to 2003.

This edition presents new quantitative and qualitative data for the school year 2002-03 in the following OECD countries: Belgium (Flemish and French Communities), the Czech Republic, Finland, Germany, Greece, Hungary, Japan, Korea, Mexico, the Netherlands, Poland, the Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom (England) and the United States and in the non-member economy Chile.

A strong and consistent finding is the preponderance of the number of boys over girls among DDD students in a wide range of analyses. Whether done by location, cross-national or national category, age of student, or phase of education, there is a higher percentage of males, typically a 60/40 split, across most OECD countries.

Students with Disabilities, Learning Difficulties and Disadvantages: Policies, Statistics and Indicators will be of particular interest to policy makers and education experts looking for an internationally comparative framework on special education.

The full text of this book is available on line via this link:
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