Inclusive Education and Effective Classroom Practices

European Agency for Development in Special Needs Education

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Introduction

This report contains an overview of the findings of the first phase of the Classroom and School Practice project. The project is focused on revealing, analysing, describing and disseminating classroom practices in inclusive settings in such a way that European teachers can implement inclusive practices on a wider scale in their classrooms.

The project is mainly focused on primary education; however, an extension to the secondary phase is planned for the near future.

The complete study consists of three phases. In the first phase a literature review has been conducted in the participating countries in order to reveal the current state of the art of effective inclusive practices. In addition, an international (mainly American) literature review was conducted in this phase. This part of the project addresses the question: which practices have proven to be effective in inclusive education?

In the second phase, an attempt will be made to select concrete examples of good practices and to describe them in a systematic way. In the final phase, exchanges between different countries are organized in such a way that transfer of knowledge and practices are maximized.

This report contains information obtained from the first phase of the project: the literature review.

Though all member countries of the European Agency for Development in Special Needs Education are participants in the overall project, not all countries were able to submit detailed reports at this stage. (For a list of participating countries, the working partners and the representatives of the European Agency see Appendix A.) Literature reviews were received from 15 countries and they are presented in this report. Of course these reports show a considerable variation: some countries have an enormous amount of research in the field, while in others the research tradition is less rich. Since we are *not* comparing countries in terms of the state of the art of research on effective practices in inclusive settings, this variation is of no importance. Our focus is to reveal the current body of knowledge on the issue independent of the specific country.

In the next chapters the following issues will be elaborated:

- the questions, goal, output and target group of the project (Chapter 1);
- the framework for the study (Chapter 2);
- the methodology of the study (both for the whole project and the literature reviews) and the timetable of the study (Chapter 3);
- the international literature review (Chapter 4);
- the European literature reviews (Chapter 5);
- the synthesis of findings (Chapter 6).

The study is edited by the project manager, but different parts of this report (Chapters 4 and 5 mainly) are written by authors selected within the participating countries. These are either working partners of the European Agency for Development in Special Needs Education themselves or 'guest writers', selected by the working partners. In each section of Chapter 5 it will be indicated who the responsible author is. At this point I would like to thank all those who have submitted country reports and literature reviews.

1 Goals of the Classroom and School Practice project

The Classroom and School Practice project is of particular interest for the field of special educational needs since it focuses directly on *practical aspects* of special needs education. As such it may have a great impact on the field of special education, especially for the main user group of the Agency's work: classroom teachers.

Two main questions form the basis for the study:

1. How can differences in the classroom be dealt with?
2. How can mainstream schools be equipped and organized in order to deal with pupils with SEN?

The following issues are important:

1. Who is the *target group* for this study?
2. What kind of *output* is aimed for (report, examples of practice)?

There is always a strong need to reflect more explicitly on the precise target groups and on the way we can or should reach them, in other words on the output of the study.

1.1 Target group

1.1.1 Problems of teachers

It can be argued that problems faced by teachers are mainly practical. Furthermore, generally teachers look for answers that can be applied in the very near future (today, tomorrow). It can also be argued that teachers are not particularly interested in solutions developed in other countries. In the main, they have a rather small circle within which they look for answers to their questions: they consult colleagues or professionals in or close to the school. If a teacher is interested in a more systematic approach to a certain problem (s)he will try to find answers by reading a relevant book or report, attending a conference or workshop or following a course. In sum: it is very unlikely that a teacher will consult international resources in order to address his or her problems.

1.1.2 How do teachers learn?

Generally teachers learn through ITT, IST, by reading books, journals and attending courses, but it can be assumed that they mostly learn from significant key persons in their immediate environment: colleagues and professionals in or around the school. In order to influence daily practice, the emphasis should be placed upon the professionals in or around schools that are significant for teachers.

The main task is thus to provide those key persons with knowledge about possibilities (models) for handling differences in the classroom and the conditions necessary for those models (resources in the class or outside the classroom) to be successful.

1.2 Output of the study

The project attempts to answer several questions concerning inclusive education. In the first instance, it is argued that an understanding of *what* works within inclusive settings is necessary. Furthermore, it is felt that a deeper comprehension of *how* inclusive education is working is needed. Thirdly, it is important to get insight into *why* it is working (the conditions).

Different types of output will provide answers to these questions. As a first step, the study will result in a report with a literature-based description of the different models and the conditions necessary for those models. As such the what, how and why questions will partly be answered through a systematic literature review. In particular, the how and why questions will be addressed through a description of some real examples of practice. Finally, it is intended to provide key people with practical knowledge through exchanges. Through visits to different locations where inclusive education is practised, a more qualitative and broader comprehension of what, how and why inclusion is working can be achieved.

In relation to the written output, it is felt that the final report should be easily accessible for teachers and it has been suggested that a report should be produced that contains both general lessons as well as practical examples. Decisions about other forms of output (materials, training packages, conferences) will be made during the final stage of the project, depending on the findings of the study.

2 Framework

Generally, it can be assumed that integration or inclusive education depends on what teachers do in classrooms. The way in which teachers realize inclusion within the classroom can take different forms. It is the goal of this study to describe these different approaches and to make them available for others. To identify various models of dealing with differences in classrooms (also known as 'differentiation', 'multi-level instruction' and other terms) therefore forms the main task of the project. However, it should be clearly noted that the existence of different models of dealing with differences in classrooms depends not only on teacher factors but also on the way in which schools organize their educational provision.

2.1 Classroom practice and teacher factors

Inclusion largely depends on teachers' attitudes towards pupils with special needs and on the resources available to them. In quite a number of studies, the attitude of teachers towards educating pupils with special needs has been put forward as a decisive factor in making schools more inclusive. If mainstream teachers do not accept the education of these pupils as an integral part of their job, they will try to ensure that someone else (often the special teacher) takes responsibility for these pupils and will organize covert segregation in the school (e.g. the special class).

The different types of resources available to teachers can be deduced from the microeconomics of teaching (Brown and Saks, 1980; Gerber and Semmel, 1985). In these theories the term 'resources' refers not only to teaching methods and materials but also to time available for instruction and to the knowledge and skills of teachers acquired through training and experience. All these resources can be used when handling differences in classrooms.

Teaching pupils with special needs in the mainstream classroom no doubt deviates from the 'regular' programme. Teachers are confronted with the question of how to instruct these pupils. Pupils with special needs may require more instruction time or other learning methods and professional knowledge. In that case, teachers will feel the need for more time, materials and knowledge. Generally, this can be achieved in two ways: by an increase in resources (more time allocated to teachers) or by re-arranging available resources (other use of available time).

Increasing available time (e.g. through the use of educational assistants) or enhancing teachers' professional knowledge (e.g. consultation teams) are ways of increasing the necessary resources for inclusive education, but teachers may also need to rearrange available resources across the pupils in the classroom. Teachers can, for example, encourage above-average pupils to work more independently, to work with computers and to help each other, so that more teaching time is left for pupils with special needs.

To realize the inclusion of these pupils in mainstream education, teachers will try to enhance the level of resources and differentiate between pupils with respect to the amount and type of resources available to them. The idea is that a successful inclusion of pupils with special needs depends largely on the availability of resources in the mainstream classroom and on the way teachers differentiate the resources between pupils.

A final important issue at the teacher and classroom level is a teacher's sensitivity and

skills in order to enhance significant social relations between pupils. Particularly for children with special educational needs (and their parents) meaningful interactions with non-disabled peers are of utmost importance. The teacher should have the right attitude, but also needs a good understanding of how to develop these interactions and relationships.

In summary, teachers' attitudes, available instruction time, the knowledge and skills of teachers and teaching methods and materials seem to be important prerequisites for special needs education within mainstream settings.

2.2 School factors

It is clear that caring for students with special educational needs is not only a question of the necessary resources at classroom level. It should be recognized that the organizational structure at a school level also determines the amount and type of resources teachers can use in teaching children with special needs.

Support can also be made available through other support services such as school advisory centres or special visiting support staff. In some countries co-operation between (mainstream) schools means additional resources can be provided for the care for pupils with SENs. It is clear that the creative strengths, knowledge and expertise, as well as the facilities of a group of schools, exceed those of a single school. The ability of co-operating schools to find ways to handle special needs may be essential for integrating special needs pupils into mainstream settings.

In summary, the issues involved in organizing inclusive education at the school level centre upon structures for providing special support within schools, the involvement of external special education services and other means of organizing support such as co-operation between schools.

2.3 The main questions

The factors mentioned above are potentially relevant to special needs teaching in mainstream schools. At the classroom level, available instruction time, the attitude, knowledge and skills of teachers and teaching methods and materials can be distinguished as important prerequisites for special needs teaching in mainstream settings. The issues involved in organizing inclusive education at the school level are:

1. a structure for providing special support within schools;
2. the role of special education services;
3. other support systems and co-operation between schools.

For this study, it is proposed to focus on all these aspects, but with an emphasis on the teacher and classroom level.

Generally, it can be assumed that integration or inclusive education depends on what teachers do in classrooms. The way in which teachers realize inclusion within the classroom can take different forms. It is the goal of this study to describe these different approaches and to make them available for others. To detect various models of dealing with differences in classrooms (also labelled as ‘differentiation’, ‘multi-level instruction’ and others) thus forms

the main task of the project. But it should be clear that the existence of different models of dealing with differences in classrooms depend not only on teacher factors but also on the way in which schools organize their education.

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3 Approach and methodology

The project consists of three different stages.

At the first stage, systematic literature reviews have been conducted. Through a description and analysis of European and other international literature, an attempt has been made to address the question of what works in inclusive settings. Different criteria were used for selecting articles, books and other documents for this stage of the study. These will be discussed below. Working partners of the European Agency for Development in Special Needs Education have submitted country reports that contain an overview of the existing literature in their languages and descriptions of current problems within the context of inclusive education in their countries.

Within the European Agency's decision-making process, it was agreed that classroom and school practice is a theme that should be addressed within all the participating countries. However, as has been previously pointed out, not all the working partners of the European Agency were able to submit their reports within the given time schedule. At the time of this report, 15 countries have submitted reports.

Alongside the reports of the participating countries, a more general international literature review has been conducted.

At the second stage of the project, examples of good practice will be selected, described and analysed. The selection will be based on the findings of the literature reviews.

At the third and last stage of the project, the examples of good practice in action will be visited and evaluated. In this phase exchanges between countries will be organized in order to maximize learning from other experiences and solutions for certain problems within the context of inclusive education. Every selected location will be visited and described and the findings will be made available for a wider audience.

The final output of the project will be described in an end report that contains both the general lessons that can be extracted from the literature reviews and the examples of good practice.

Given the need to restrict the scope of the study (considering time schedules and available resources) it was also proposed to confine the study to the primary school level. It was agreed that in the first phase of the study the focus would be on the age group of 7–8 to 11 years old. Later a replication of the study will focus on the secondary school age phase.

Below the approach for the literature reviews is expanded upon.

3.1 Methodology of the literature review

The goal of the literature review is to gather information about the possible models of classroom practices in inclusive settings, and the effects of these approaches on the pupils or peers. The project manager has conducted a literature review within an international perspective (see Chapter 4); the working partners were asked to conduct a literature review within their own country (Chapter 5). This means that working partners were asked to collect all the relevant information that is available within their own countries' perspective – either in an international language or in the country's own language, but always referring to the situation in that specific country. Working partners were asked to collect those articles

(books, thesis, reports), to describe the findings systematically and to write a synthesis of these findings.

In the following attention is paid to:

- the type of questions that directed the review;
- how and where the information was obtained;
- the type of descriptors that were used;
- how the information was collected;
- how the information was processed and evaluated;
- how the information was synthesized.

3.2 Framework and questions

The literature review was focused on the 'state of the art' of classroom practice in a given country. The central question was: What works?

This literature overview considered the following questions:

1. What arrangements and factors within the context of the curriculum (classroom practices, teaching methods, educational organization and so) are considered as essential for helping children with SEN in mainstream classrooms?
2. What is known about the outcomes of these approaches (on a pupil level)?

Working partners were asked to provide an overview of the existing findings in literature (research or evidence based opinion documents) in *their own country* (a national oriented review). It was stressed that only literature that refers to practices within their own country (in their own or other language) should be selected. The more international oriented review, completed by the project manager, provided a broader overview concerning the issue of classroom practices.

Working partners were also asked to provide an answer to the following two questions:

3. What are the main problems (on the level of classroom practice, school organization, teachers) in your country within mainstream classrooms that include pupils with SEN?
4. Which groups of pupils with SEN cause the most problems within mainstream settings and why?

For questions (3) and (4) working partners were free to choose the best way to answer them. For questions (1) and (2) a more co-ordinated methodology was developed (as outlined below).

3.3 How and where the information was obtained

A literature review can be conducted in various ways. The best way, however, is to have the search conducted with the help of a professional literature researcher within the field of special education (from a university, research institute or national resource centre). He or she would know the best way to collect the information and would be familiar with the ins and

outs of a literature review, thus guaranteeing the quality and width of the review. Therefore, the first step was to contact a researcher who had experience in the field and with literature reviews.

Thus, working partners were asked to seek help from a researcher and an institution where an automatic retrieval of literature could be done. These institutes could be: institutes for research, universities, national resource, support or development centres, or ministries of education.

Most countries have databases with documents (articles, books, student theses, 'grey' literature) that can automatically be searched with the help of a librarian or document specialist. It was stressed that the search should only cover the specific country's field of special education or inclusive education (it did not have to cover international findings and documents) in either the country's native language or any other language.

3.4 The type of descriptors that were used (*or* how the right materials were found)

The descriptors or keywords that should be used for the literature review followed more or less directly out the questions that are listed above. In order to have the review conducted properly and in congruence with the work of other working partners, it was felt that a common set of descriptors was required. It was decided to select information that:

- referred to findings after 1990;
- referred to primary education;
- referred to inclusive education, mainstreaming or integration;
- referred to pupils with special needs, disabilities or handicaps (all types of special needs);
- referred to classroom practices, curriculum, educational arrangements, teaching methods and so on;
- referred to achievements, outcomes, effects or output in terms of academic achievement (or cognitive ability), emotional outcomes (emotional development, self-esteem, self-concept, student attitudes) or social behaviour (social adjustment, social development, interpersonal relationship);
- referred to situations within the working partners' country only.

3.5 How the information was collected

When the librarian provided an overview of possible relevant documents, the working partner (or researcher) had to decide whether a certain document was to be ordered and read. All ordered and relevant material had to be dealt with systematically. An abstract of the document was generally included, but these abstract were mostly superficial and not focused on the detailed questions. Therefore, working partners were asked to summarize the information within the perspective of the study questions. In addition, working partners were asked to use the form that is presented below.

3.6 How the information was processed and evaluated

Working partners were asked to fill in a form (based on a form used in the NFER, UK) for every specific document. This form is used in 'critical literature review'. It is useful for systematically describing and processing information.

The form contains the following subjects:

Author and title	Details of author and title of book, journal article etc.
Publication details	Details of publisher, place and date of publication
Language	In what language is the document written?
Country of origin	From what country did publication originate?
Type of research	Qualitative, quantitative, longitudinal study, literature review, discussion of research findings etc.
Methodology	Explanation/justification of the research rationale, design etc.
Sample	Population characteristics (type of SEN, size, age, geographical location, socio-economic factors, ethnic mix etc.) Sampling method employed, sample size, response rate
Method of research	Type and quality of instruments used – questionnaires, interviews, observation etc.
Main findings	Summary of main findings/conclusions drawn from the research
Evaluative commentary	Comments on the quality/limitations of the research; reliability of methods used? quality of evidence? bias? findings of particular interest; implications for policy

In an appendix to the final country report, these forms were to be presented for every document used or mentioned in the country report.

3.7 How the information was synthesized

Working partners were asked to write a country report that should contain an overview of the literature used in a systematic way (see the form above). Working partners were to integrate the findings in an English text that contained a narrative answer to the questions mentioned above. The report contained the following sections:

- Introduction
- Methodology (a description of how the work was done, including the descriptors used in the review)
- Classroom practices and cognitive outcomes (including references), together with type of SEN wherever needed and relevant

- Classroom practices and emotional outcomes (including references), together with type of SEN.
- Classroom practices and social outcomes (including references), together with type of SEN.
- What are the main problems in your country concerning the issue of classroom practice within mainstream classrooms that include pupils with SEN?
- Which groups of pupils with SEN cause the most problems within mainstream classes and why?
- Summary: what works?

This outline forms the basis of the literature reviews that will be presented in the final report.

3.8 Timetable and planning of the project

The following planning is currently being used for the classroom practice project:

April 2000	Submitting reports
August 2000	Analysis of reports submitted, by project manager and drafting an initial report concerning phase 1
August 2000	Development of proposals for the selection and description of classroom practices in phase 2 by project manager (concerning the question: How does it work?)
September 2000	Discussion of both draft report and proposal for next phase. Meeting in Brussels
September 2000	Writing interim report of phase 1 for Commission
February 2001	Selection of practices, analysis of practices and description of practices
March 2001	Submitting report phase 2 to project manager
April 2001	Preparing country visits (exchanges)
May–October 2001	Country visits
October 2001	Submitting reports country visits
December 2001	Analysis and synthesis by project manager
February 2002	Plenary meetings with experts
March 2002	Draft report
April 2002	Submitting final report for Commission

4 International literature review

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4.1 Introduction

As pointed out earlier, it can be assumed that inclusive education depends on what teachers do in classrooms. The way in which teachers realize inclusion within the classroom can take different forms. The goal of the project is to describe these different approaches and to make them available for others. The main purpose of the literature reviews is to gather information about possible models of classroom practices in inclusive settings, and the effects of these approaches on pupils or peers.

This chapter contains the findings of the review conducted by the project manager. The review was focused on the literature outside Europe and in the English language. In Appendix A all relevant documents are presented using the standard form.

4.2 Questions

The review is focused on the following questions:

- What arrangements and factors within the context of the curriculum (classroom practices, teaching methods, educational organization) are considered as essential for helping children with special education needs in mainstream classrooms?
- What is known about the outcomes of these approaches on pupil level in terms of academic achievement, emotional development and social behaviour?

4.3 Methodology

Studies reported in this review were located by searching the 1990–99 ERIC and Psy-lit databases. Information was selected that:

- refers to findings after 1990;
- refers to primary education;
- refers to inclusive education, mainstreaming or integration;
- refers to pupils with special needs, disabilities or handicaps (all types of special needs);
- refers to classroom practices, curriculum, educational arrangements, teaching methods;
- refers to achievements, outcomes, effects or output in terms of academic achievement (or cognitive ability), emotional outcomes (emotional development, self-esteem, self-concept, student attitudes) or social behaviour (social adjustment, social development, interpersonal relationship).

The descriptors, used for the literature review, are directly based on the criteria listed above. The following descriptors were used: primary education, inclusive schools, mainstreaming special

education, and regular-and-special-education relationship.

To determine the effects on emotional development, the following descriptors were used: self-concept, self-esteem, student attitudes, and emotional development; to determine the effects on social behaviour: social networks, social behaviour, social integration, social status, interpersonal communication, social adjustment, social development, interpersonal relationship, and to determine the effects on academic achievement: cognitive ability, academic achievement were used as descriptors.

In addition, reference lists from identified studies were searched for additional sources. To be included in the search, studies had to meet three methodological criteria:

- the use of control groups;
- information about the sample such as age and type of special needs, disabilities or handicaps;
- information on the type and methods of research.

'Critical literature review' forms were filled in (based on a form used in the NFER) for every selected document. The form consisted of the following subjects: author and title, publication details, language, country of origin, type of research, methodology, sample, method of research, main findings, and evaluative commentary.

4.4 Results of the search

Over 100 studies were located by searching the ERIC and Psy-Lit databases. Many of these were excluded from the review because they didn't meet the criteria. Studies concerning the integration of bilingual or gifted students, and studies concerning early intervention or kindergarten were not relevant for this search. Many findings concerning teachers' perceptions of effective classroom practices were identified. Although these opinions can be very valuable, only evidence-based studies were included. After the screening process, a disappointingly small number – 13 studies – were considered relevant for this review. Most of these studies were of US origin. Although some projects focused on emotional and social outcomes, most attention was paid to cognitive outcomes. The samples of most studies consisted of students with learning disabilities; little attention was paid to students with physical/ sensorial handicaps, or other type of SEN.

In section 4.5 findings relevant to cognitive, social and emotional development are reported separately.

In section 4.6 information about possible models of classroom practices is summarized, as well as the effects of these models on pupils and peers. These approaches will be discussed separately.

4.5 Findings

4.5.1 Effects in terms of academic achievement

In a study by Self, Benning, Marston and Magnusson (1991), a co-operative teaching project (CTP) was implemented for three years in a Minneapolis public school. The major goals of the project were to reduce the discrepancy in reading and readiness skills of high-risk students and

their peers, and to increase classroom teachers' repertoire of instructional strategies to use with low-achieving students.

Students who are at risk for academic failure were placed in a supplementary group. Special education and compensatory education teachers provided 25 minutes of supplementary instruction to small groups of at risk students for five days a week. In addition, students with the most limited language skills were provided with 25 minutes of small group supplementary instruction by speech/language clinicians for three days a week. Supplementary instruction was given in regular classrooms during scheduled reading periods to minimize disruptions and to increase learning time. All teachers attended meetings to review progress, co-ordinate instructional plans and share instructional strategies.

The impact of CTP on the school was examined by evaluation of the average reading performance of each grade level during autumn, winter and spring. Curriculum based measures were used and data were compared to district-developed normative information. Data show that there appeared to be an overall positive effect on the progress of all students.

The effectiveness of the CTP was evaluated using single-subject time series analyses of pupil learning rate while students were taught in both a CTP and non-CTP condition during an academic year. During the second and third year, this analysis was conducted for resp. 9 and 28 students. Data show that students taught in a CTP condition made significant gains.

The majority of students at risk were able to progress at or above district expectations without being pulled out or referred to special education.

Although findings are restricted to one school and a limited range of grades, the findings suggest that the project appeared to have a positive impact on the academic achievement of high-risk students. Authors state that co-operative planning and in-service training time is essential to improving communication, increasing instruction skills, and ensuring the commitment of all involved staff.

Kamps, Barbetta, Leonard and Delquadri (1994) examined the effects of classwide peer tutoring (CWPT) on the inclusion of autistic students. Participants were three male students with autism and their peers who were enrolled full time in general education classrooms in three suburban elementary schools. The students with autism (8, 8 and 9 years old) were considered to be high functioning as indicated by intellectual capabilities, language skills and academic skills, but were lacking in social skills.

All students were trained for three 45-minute sessions on CWPT procedures. CWPT consisted of 25–30 mins of peer-mediated instruction that occurred 3–4 days a week.

Each week students were assigned a tutoring partner and were then assigned to a tutoring team. During tutoring, the learner read from the same reading materials used in the baseline while the tutor scored points on a point sheet for correctly read sentences. The tutor also provided positive and corrective feedback. Following reading, the tutor asked 3 mins of comprehension questions. Tutor learner roles were reciprocal. Teachers monitored tutor–learner performances and gave students bonus points. At the end of each session, students orally read scores to the teacher, who publicly posted and announced a 'grand-total'.

Data were collected for the three target students and 14 of their peers (6 students with learning disabilities, and 8 non-disabled students). Immediately following peer tutoring, students independently read that session's passage for a 2-min timed reading, to measure the rate of words read correctly and reading errors. Immediately following each 2-min timed reading the experimenter asked five comprehension questions (who, what, were, when, why).

The findings indicated that classwide peer tutoring was an efficient and effective strategy

for increasing the academic achievement both of students with autism and their non-disabled peers.

The primary purpose of a study by Fuchs, Fuchs, Mathes and Simmons (1997) was to explore the effectiveness of Peer-Assisted Learning Strategies (PALS).

Participants were 120 students from 40 classrooms (grades 2–6) in 12 schools representing three districts. All teachers identified three students in their reading class: a learning disabled (LD) student certified as such in reading in accordance with state regulations, a non-disabled but low-performing (LP) student, and a student estimated to be an average achiever (AA). Reading progress of these 120 target students (3 students x 40 teachers) were compared to corresponding controls.

PALS was conducted during regularly scheduled reading instruction, 35 minutes per day, three times per week, for 15 weeks.

Students were assigned to pairs and engaged in three strategic reading activities:

- partner reading with retell (each partner reads aloud for five minutes to increase students' oral reading fluency; after partners complete their turns, the lower performing reader retells for one minute in sequence what had been read);
- paragraph summary (students read aloud one paragraph at a time and attempt to identify the subject and main idea by responding to questions printed on a cue card);
- prediction relay (the reader makes a prediction about what will be learned on the next page, reads aloud from the page, confirms or disconfirms the prediction, summarizes the text makes a new prediction and turns to the next page).

To give PALS a competitive and co-operative dimension, pairs were assigned to one of two teams. Students earn points by reading without errors, working hard, behaving co-operatively, identifying correct subjects, making reasonable predictions and checking predictions. Points are awarded by tutors and teachers and recorded on scorecards. At the end of the week, the teacher totals the teams' points and announces the winner. Teachers use whatever reading materials they believe are appropriate: the programme does not require teachers to acquire, develop or modify materials.

The No-PALS teachers conducted reading instruction using traditional methods.

The Comprehensive Reading Assessment Battery (CRAB) was used to measure pre-treatment, post-treatment and growth scores. Findings indicate that LD, LP and AA students in PALS classrooms made significantly greater progress than their counterparts in No-PALS classrooms across the three reading measures.

Teachers completed questionnaires to express their views of the benefits of PALS, and students were interviewed to explore student satisfaction. Teachers believed PALS had positively affected their LP, LD and AA students' reading achievement and all PALS students expressed a belief that the treatment had helped them to become better readers.

Stevens and Slavin (1995b) studied the effects of a co-operative learning approach in reading and writing on academically handicapped and non-handicapped students.

Subjects were 1,299 students in second through sixth grade in a suburban, working-class school district in Maryland. Experimental and non-experimental schools were matched on socio-economic makeup and were similar in ethnicity and levels of achievement. The overall special education population, including learning-disabled students, in the two groups averaged

approximately 12% of the school population.

To mainstream academically handicapped students (at least two years behind their grade level, e.g. learning disabled, educationally mentally handicapped), the Co-operative Integrated Reading and Composition (CIRC) programme was used by the experimental teachers for two years. CIRC is a co-operative learning approach to teach elementary reading and language arts and consists of three main elements: story-related activities, direct instruction in comprehension strategies, and integrated writing and language arts. Instruction begins with the teacher presenting the new information or strategies through models and explanations. Students are assigned to heterogeneous ability teams in which they collaborate on eight story related activities:

- *Partner reading*: students read the story silently first, then orally with their partners.
- *Treasure hunts*: students are given questions that focus on understanding what happened in the story. Students are also asked to predict how the characters might solve problems that occurred in the story and to clarify why the characters behaved in a particular way.
- *Words out loud*: students practise new words with their partner.
- *Word meaning*: students are asked to write the meaning of new words and to use them in meaningful sentences.
- *Story retelling*: students summarize main events in the story to their partners.
- *Story-related writing*: students are given a writing topic related to the theme or events in the story.
- *Quizzes*: students are given a comprehension quiz about the story, are asked to write meaningful sentences using new words, and are asked to read the new vocabulary aloud to the teacher. The students complete these quizzes independently. Individual score are used to determine the team score; this connects the success of the group with the success of each group member and motivates group members to help one another.
- *Independent reading*: students are asked to read 20 minutes silently each evening. Students are required to complete a book report every two weeks.

One day each week students receive instruction in reading comprehension strategies such as strategies for identifying main ideas, making inferences and drawing conclusions about what they have read. In addition to this, students spend approximately three days a week engaged in the steps of the writing process: planning, writing drafts, revising, editing and making a final draft. During each step of the writing process, students consult with their peers.

To provide more support for academically handicapped students the special education teacher went into the classroom for about 30 minutes a day. Teachers were observed and coached at least once every two weeks to monitor the programme implementation.

In the control schools teachers continued using their traditional methods and curriculum materials. Academically handicapped students received pullout reading instruction in a separate room for 30 minutes a day.

Pre- and post-tests were conducted on reading and language arts. After the first year academically handicapped students in CIRC had a significantly better achievement in their reading vocabulary and reading comprehension than did their counterparts in traditional pullout special education programmes. After the second year, learning disabled and non-disabled students performed significantly better in reading vocabulary, reading comprehension and

language expression.

The effects of curriculum-based measurement and consultation on teacher planning and student achievement in mathematics operations were examined by Fuchs, Fuchs, Hamlett and Stecker (1991).

Participants were 33 teachers in 15 schools in a south-eastern metropolitan area. Each teacher selected two students for whom treatment effects would be evaluated. These students were in grades 2–8, were chronically low achieving in mathematics, and had been classified as learning disabled or emotionally disturbed according to state regulations. Teachers were assigned randomly one of three treatments:

1. curriculum-based measurement (CBM) with recommendations about the nature of instructional adjustments (expert system instructional consultation, CBM–ExS);
2. CBM without ExS advice (CBM–NExS); and
3. control (no CBM).

Teachers in both CBM conditions employed CBM to track pupil progress towards operations goals for 20 weeks. This computer-assisted monitoring comprised the following:

1. *Goal selection and ongoing measurement of the goal material:* Teachers determined an appropriate level at which to establish each student's goals. Using a standard measurement task, teachers assessed each pupil's performance at least twice weekly, each time on a different test representing the type and proportion of problems from the goal level they had designed.
2. *Evaluation on the database to adjust instructional programs:* Each week, teachers employed software to graph the student's scores automatically, apply decision rules to the graphed scores, get feedback about those decisions and conduct a skills analysis of the students' responses to the test items.

Whenever prompted by the graphed decision rules, teachers were asked to adjust the student's program. CBM–NExS teachers determined the nature of their adjustments on their own. CBM–ExS teachers relied on the ExS for advice about the nature of adjustments. Control teachers were directed to use their standard procedures for monitoring student progress for their low-achieving students targeted for the study and for adjusting students' instructional programs when it appeared that these students were not responding successfully to instruction.

To assess achievement, pre- and post-treatment tests were conducted. Tests indicated that for digits and problems, the achievement of the CBM–ExS group exceeded the achievement of the CBM–NExS and the control groups.

At the end of the study, the number of instructional adjustments introduced by teachers during the study was reported on a post-treatment questionnaire. The nature of instructional adjustments was coded from instructional plan sheets. The control group made reliably fewer instructional changes than either CBM group, which made comparable numbers of changes. The CBM–ExS teachers used the following procedures for more weeks than did the CBM–NExS teachers:

1. using self-talk or an alternative algorithm to structure instruction;
2. structuring test feedback to improve student motivation for optimal CBM performance; and

3. incorporating timed mixed-problem drill for maintenance.

On the other hand, CBM–NExS teachers provided instruction by re-explaining/reviewing the algorithm previously used for instruction and providing practice on the re-explained algorithm for more weeks than did the CBM–ExS teachers.

Results indicated that CBM was not uniformly related to superior student achievement. Rather, only the combination of CBM and consultation to support teachers' use of instructional adjustments resulted in better achievement.

In another study on classwide curriculum-based measurement by Fuchs, Fuchs, Hamlett, Phillips and Bentz (1994) 40 general education teachers (Grades 2–5) participated. Each of them had included at least one student with an identified learning disability in their mainstream math instruction. Teachers identified three students for whom treatment effects would be evaluated:

1. one student who was chronically low achieving in mathematics, and had been classified as *learning disabled* (LD) according to state regulations;
2. one student who was chronically *low achieving* (LA) in mathematics but had never been referred for special education assessment;
3. one student whose mathematics achievement was near the middle of the class, i.e. *average achieving* (AA).

Teachers were randomly assigned to three treatments:

1. curriculum based measurement with instructional recommendations (CBM–IN, N = 10);
2. curriculum based measurement without instructional recommendations (CBM–NoIN, N = 10);
3. a contrast group (no CBM, N = 20).

Teachers in both CBM–IN and CBM–NoIN conditions employed CBM for 25 weeks. CBM consisted of:

- *weekly measurements*: teachers assessed each pupil's performance weekly, on a test representing the grade level's annual operations curriculum; each test comprised 25 problems, at grades 2–5; respectively students had 1.5, 2, 3 and 5 mins to complete the test; teachers administered the test in whole-class format, responses were entered into a computer program that scored the test and managed the data;
- *student feedback*: software summarized each pupil's performance in terms of a graph displaying total number of digits correct over time and a skills profile showing student's mastery status on each type of problem included in the year's curriculum; teachers taught students to read and interpret graphs and skills profiles in two 20-min sessions; they also taught students to ask themselves questions about their graphs;
- *teacher feedback*: twice monthly, teachers received a computer-generated copy of each student's graph and skills profile, and a report summarizing the performance of the class.

The CBM–NoIN teachers received descriptions of performance; in the CBM–IN condition the

report provided descriptions of performance, as well as instructional recommendations for:

1. what to teach during the whole-class instruction;
2. how to constitute small groups for instruction on skills on which students experienced common chronic difficulty;
3. skills and computer-assisted programmes each student should use for the next two weeks; and
4. classwide peer tutoring (CWPT), listing students who required, and those who could provide assistance with, skills.

Teachers in contrast groups used their standard procedures for monitoring student progress, providing student feedback, and planning their instruction.

Analysis on achievement was conducted on pre- and post-treatment tests between subjects (CBM–IN vs. CBM–NoIN vs. contrast) and within subjects (LD vs. LA vs. AA). In the CBM–NoIN condition, the achievement of 4 out of 10 LA students surpassed that of their contrast treatment peers, whereas in the CBM–IN condition the achievement of 9 out of 10 LA students surpassed the mean growth of their contrast treatment peers.

In both CBM conditions, the achievement of 7 out of 10 AA students surpassed the mean growth of their contrast treatment peers.

In both CBM conditions the achievement of only 6 out of 10 LD students surpassed the mean growth of their contrast treatment peers.

Saint-Laurent, Dionne, Giasson, Royer, Simbard and Piérard (1998) have conducted a study on an intervention programme for students at educational risk (PIER – programme d'intervention auprès des élèves à risque); 606 French-speaking, 3rd-grade students from 26 schools participated in this study. The treatment group consisted of 288 students (145 girls, 143 boys). Of these, 79 were identified as being at risk of school failure. Of these, 34 students were identified as special education students by the school, 27 had LD, 5 had behaviour disorder (BD), and 2 had hearing impairment (HI).

In the comparison group, among 318 students (139 girls, 179 boys), 86 students were classified as at-risk. Of these 38 were identified as special education students (32 with LD, 4 with BD and 2 with communication disorders).

The programme consisted of four components:

- *collaborative consultation*: weekly 60-min meetings of the general and special education teachers to determine goals, analyse observations, share responsibilities and plan upcoming instruction periods;
- *co-operative instruction*: special education teachers spent three hours per week with the class;
- *parent involvement*: all parents were encouraged to monitor their child's educational progress at home; teachers maintained continual contact with parents through regularly scheduled meetings;
- *strategic and adapted instruction in reading, writing and mathematics*: teachers focused on helping students to become strategic learners and to develop a positive attitude towards school subjects; teachers made adaptations for students at risk of failure (they modified materials or gave them more time to complete a task and provided them with suggestions and support to improve their study skills).

The comparison group continued receiving general education, with minimal co-operation between the special and general education teacher. The 38 special education students in the comparison group received instruction in resource classrooms.

Pre- and post-tests were conducted on reading, writing and mathematics. Significant effects of the programme were found on writing scores for students at risk and on reading and mathematics scores for general education students. No significant treatment effects were detected for students with learning disabilities.

Authors state that it is impossible to determine which component of the programme is responsible for the various effects.

Stevens and Slavin (1995a) studied the effects of a co-operative elementary school model. The sample consisted of 1,012 students in second through sixth grades in five elementary schools of a suburban Maryland school district. The model was adopted by 21 classes in the two treatment schools; 24 classes in the three comparison schools continued to use their regular teaching methods and curriculum. The components of the co-operative model included:

- the use of co-operative learning in academic classes: teachers were trained to use two co-operative models: Co-operative Integrated Reading and Composition (CIRC) and Team Assisted Individualization-Mathematics (TAI);
- mainstreaming learning disabled students in regular education: the learning disabled students received all their instruction in the regular classroom; special education teachers taught with regular classroom teacher using CIRC or TAI; learning disabled students were integrated into heterogeneous co-operative learning teams;
- teachers coaching one another: teachers were provided with many opportunities to visit one another's classes and provided support and feedback to one another;
- teachers collaborating in instructional planning;
- principal and teachers collaborating on school planning and decision-making;
- principals and teachers encouraging active involvement of parents.

Achievement pre-tests were conducted on total reading, total language and total mathematics. Achievement post-tests were conducted in the spring of the first and the second year.

After two years, academically handicapped students in co-operative elementary schools had significantly higher achievement in reading vocabulary, reading comprehension, language expression, maths computation and maths application in comparison with similar students in comparison schools. The results also suggest that gifted students in heterogeneous co-operative learning classes had significantly higher achievement than their peers in enrichment programmes without co-operative learning.

Authors state that it is impossible to determine the impact of any of these components from these data. The study did not evaluate all the components of the co-operative learning programme. Components such as peer coaching and co-operative planning among teachers and between teachers and principal were not specifically addressed.

Banerji and Dailey (1995) examined the effects of an inclusion programme in grades 2–5. The study was conducted in an elementary school, located in west-central Florida. Students with Specific Learning Disability (SLD) in grade 5 were placed in an inclusion classroom with general education peers, with the SLD teacher co-teaching with the general education teacher.

Students in grades 2–4 with SLD were served with Normal Achieving (NA) students in inclusive, mixed-grade groups called 'houses'. A 'house' consisted of four classrooms with a central, common work area, and was taught by a team of four teachers, and one teacher specialized in SLD.

All students were provided with an age- or grade-appropriate curriculum in the inclusive classroom/house; no children were excluded from any available educational opportunity. Co-operative learning and peer instructional strategies were used, and special education support was provided in the general classroom/house. The fifth-grade sample consisted of an inclusion class with 13 students with SLD and 17 NA students. Perceptions of development of all 45 students with SLD and 38 randomly picked NA students served within the grade 2–4 inclusion houses were provided by ten teachers.

NA students were compared to students with SLD on reading, spelling, attitude, motivation and self-concept. Findings suggested that students with SLD made academic gains at a pace comparable to that of NA students.

The authors state that the study would have been stronger had a comparison group been available of students with SLD served in a pullout resource programme.

An inclusive science instruction model was examined by Mastropieri, Scruggs, Mantzicopoulos, Sturgeon, Goodwin and Chung (1998).

Three fourth-grade classroom teachers and one special education teacher from an elementary school in a small midwestern town participated in this investigation. The special education teacher and one of the fourth-grade teachers had requested permission to team-teach during science class. Five students with disabilities were included in the target classroom during science. Two students were classified as having learning disabilities, one was classified as mildly handicapped, one as emotionally handicapped, and one as multiply disabled. The student with multiple disabilities had fine and gross motor difficulties, communication difficulties and used a motorized wheelchair. The target classroom contained 19 non-disabled students. The two textbook-based classrooms contained 40 students.

In the target classroom, materials developed by the National Science Resources Centre were used to provide children with opportunities to learn science by participating in direct observation, manipulation and experimentation with materials in physical, life and earth sciences. In the comparison classes, science lessons were taught as traditional textbook-based instruction.

All meetings of the inclusion classroom were observed over a seven-week period. All classes were videotaped, and field notes were taken during each visit. Pre- and post-tests were conducted, based on questions presented in the textbook. All students were given a survey of their attitudes towards science.

Descriptive analyses of scores of the five special education students suggest that these students collectively scored at or above the mean of the class (except for the pre-test scores), and substantially higher than the mean of the comparison classes. Of the three groups, the special education students made the descriptively highest gains in pre- and post-test mean scores. Analysis of qualitative data confirmed that the seven critical inclusion variables, previously observed by Scruggs and Mastropieri (1994), were very much in evidence in this inclusive science classroom.

The curriculum was seen to be appropriate for the needs and interests of all students. Presentations and activities were highly concrete and meaningful and the entire unit was observed to be highly motivating to all students. Language and literacy requirements of science

learning, particular problems for the students with disabilities, were minimized by the curriculum.

Although there were two comparison classes, there was only one inclusion class. Authors do not know how a similar group of disabled students would have achieved in the textbook-based classrooms.

A study by Jenkins, Jewell, Leicester, Jenkins and Troutner (1991) examined the effects of co-operative learning, cross-age tutoring and in-class services for students with handicaps and remedial students.

Two elementary schools participated in this project. School 1 participated in a programme of innovations and school 2 served as a comparison. In school 1, 20 students were classified as learning disabled (LD), 2 as mildly retarded (MR), and 1 as having a serious behavioural disorder (SBD). In school 2, totals were 32 LD, 1 MR and 2 SBD. The total student populations of schools 1 and 2, were 374 and 715, respectively. All students in grades 1–6 in school 1 (332) and a sample of students in grades 1–6 in school 2 (209) participated in this research.

Co-operative Integrated Reading and Composition (CIRC) procedures developed by Stevens, Madden, Slavin *et al.* (1987) was implemented primarily on the sixth-grade reading and language arts programme, the only exception to full implementation of CIRC was the absence of lessons for the direct instruction of reading comprehension. Portions of the CIRC procedures (vocabulary, partner reading, story-related writing) were implemented in grade two.

A cross-age tutoring programme was introduced for the first-, second-, and third-grade remedial and special education students. Intermediate-grade students who were skilled readers tutored these students in reading. Roughly 35 students received tutoring which was scheduled four days a week for 25 minutes daily.

All specialists and aides were assigned classrooms in which they provided assistance to low performing students. The only students who were pulled out for instruction were those who received peer tutoring and several students who received additional maths or spelling instruction. Most specialists in school 2 removed their students from their classroom for remedial or special education.

Pre- and post-tests on achievement, social behaviour and teacher perceptions were administered to students of both schools.

The CIRC programme failed to show effects on oral reading or most of the BASS (Basic Academic Skills Samples – an index of student achievement in math, written expression, spelling and reading) measures, regardless of student type (regular, remedial, special education). One exception was a significant effect on a BASS writing subtest favouring students who received CIRC. Given the previously reported success of CIRC in reading and writing achievement, authors are at a loss to explain the lack of effects in this study. Most aspects of the CIRC programme were implemented, except for the reading comprehension lessons, and the home reading programme. Authors suggest that these components might be critical for the programme's effectiveness.

The effects of cross-age tutoring were similarly disappointing. The findings are contradictory to the research literature on peer tutoring, which usually shows that tutoring improves achievement. Authors think that perhaps the content of the programme, which devoted considerable time to teaching isolated words, was not appropriate. A second explanation is that tutoring was actually effective, but other aspects of the students' remedial programme were weak. The tutoring programme may have compensated for other services that were less effective than normal.

Between 85% and 100% of the students in school 1 versus 22–44% of the students in school 2 received instruction in their classroom from specialists. However, on most achievement measures, special and remedial education students in school 1 did not differ over those in school 2. One exception was a significant effect on the BASS maths test, favouring special education students in school 2 over those in school 1.

4.5.2 Effects in terms of social behaviour

Salisbury, Evans and Palombaro (1997) conducted a study on the effects of collaborative problem-solving (CPS). Data reported in this investigation were collected in one elementary school in Johnson City, one of the poorest communities in New York State. In year 1, participants included 100 students without disabilities, 17 students with mild/moderate disabilities, 12 students with severe/ profound disabilities. In addition, 165 students without disabilities received instruction in year 2.

CPS process instruction was provided in a half-day (3hr) session by the principal investigator and the project co-ordinator. When the process was introduced to the students a CPS session occurred when teachers identified a physical, social or instructional instance of exclusion. Students were asked to solve the problem together in five steps:

1. Identify the issue: 'What's happening here?'
2. Generate all possible solutions: 'What can we do?'
3. Screen solutions for feasibility: 'What would really work?'
4. Choose a solution to implement: 'Take action.'
5. Evaluate the solution: 'How did we do? Did we change things?'

Outcomes were identified by the teachers and project staff from field notes, observations and interview sources.

The teaching staff judged CPS as an important strategy for promoting the physical, social and instructional inclusion of students with disabilities in their classroom. Students developed concern for others, accepted and valued diversity, were empowered to create change, worked with others to solve problems, developed meaningful ways to include everyone, and fostered understanding and friendship. The use of the CPS process moved to the level of 'routine'.

A study by Stevens and Slavin (1995a) reports on a co-operative elementary school model, using two co-operative models: Co-operative Integrated Reading Composition (CIRC) and Team Assisted Individualization-Mathematics (TAI), co-teaching, collaborative instructional planning, school planning and decision-making, and encouragement of active parent-involvement (2.1).

In addition to cognitive effects, social relations were measured. Students were asked to list the names of their friends in the class at approximately the same time they were given the other pre- and post-tests.

For learning disabled students the social relations measures were reanalysed to determine the number of times they were selected as a friend by their non-handicapped peers. Findings suggest that there were better social relations in co-operative elementary schools and handicapped students were more accepted socially by their non-handicapped peers than were similar students in traditional schools with pullout remedial programmes.

In addition to the positive cognitive outcomes of classwide peer tutoring (CWPT), a study

by Kamps, Barbetta, Leonard and Delquadri (1994) reports on the social inclusion of autistic students (2.1).

Immediately following reading instruction during baseline and tutoring conditions, students engaged in 15–20 min of social time. Classroom areas were set up with activities to promote social interactions. Some general rules were announced prior to free time (e.g 'be nice to your friends', 'every student must join a group'). The opportunity for social interaction is especially important for students with autism who often have limited interactions with their peers.

Social skills performance data were collected for three autistic students and 14 of their peers (6 students with learning disabilities, and 8 non-disabled students). Observations were conducted during unstructured free-time activities. A computerized system was used to determine the frequency and duration of social interactions between peers.

The occurrence of CWPT appeared to influence students socially by increasing the duration of social interaction time during unstructured free time activities. Peer survey data were collected and 88% of the peers indicated that CWPT helped them get along better with their peers, and that they would participate again.

Jenkins, Jewell, Leicester, Jenkins and Troutner (1991) conducted a study on three inclusion treatments: co-operative learning, cross-age tutoring, and in-class services for students with handicaps and remedial students (2.1). School 1 embarked on a programme of innovations and school 2 served as a comparison. Co-operative Integrated Reading and Composition (CIRC) procedures developed by Stevens, Madden, Slavin *et al.* (1987) was implemented primarily on the sixth-grade reading and language arts programme, a cross-age tutoring programme was established for the first-, second- and third-grade remedial and special education students, and all specialists and aides were assigned classrooms in which they provided assistance to low performing students.

Social effects on students were examined through the Walker-McConnel scale, which measures social behaviour valued by teachers, peer-related social behaviour, and school-related adaptive social behavioural competencies. Teachers completed the Walker-McConnel rating form for each special education student and a sample of two remedial and two regular students in their class in November and in May.

Teacher ratings of teacher- and peer-preferred social behaviour and school adjustment were comparable in the two schools. Implementation of the new support services model in school 1 had no measured effects on social behaviour.

4.5.3 Effects in terms of emotional development

Banerji and Dailey (1995) examined the effects of an inclusion programme in grades 2–5 (2.1). Students in grades 2–4 with Specific Learning Disability (SLD) were served with Normal Achieving (NA) students in inclusive, mixed-grade groups called 'houses'. A 'house' consisted of four classrooms with a central, common work area, and was taught by a team of four teachers, and one teacher specialized in SLD. Students with (SLD) in grade 5 were placed in an inclusion classroom with general education peers, with the SLD teacher co-teaching with the general education teacher. Co-operative learning and peer instructional strategies were used, and special education support was provided in general classroom/ house.

Affective outcomes of students with SLD in fifth grade were compared to their NA classmates. On a 17-item attitude survey, students reported how they felt about school, their perceptions of their own success, and whether they felt different from other students. At the end

of the school year, compared to the NA students, fewer students with SLD responded positively to only three statements: 'I am well behaved in class', 'I can do most of my school-work without help', and 'I don't feel different from other kids in my class.' On all remaining items the NA group did not show significantly higher means.

Perceptions of development and behaviour of all 45 students with SLD and 38 randomly picked NA students within the grade 2–4 inclusion houses were provided by teachers and parents. Survey questionnaires were developed and responses were compared to examine whether differences in parent and teacher perceptions of effectiveness were associated with students' SLD/NA status.

Differences in parent perceptions were found in only 2 out of 16 items, favouring the NA group. Both items focused on child's ability to handle schoolwork. On all other items which focused on a sense of belonging in school, interaction with others and self-confidence, parents' perceptions of SLD and NA groups were not significantly different.

Teachers indicated less positive perceptions of students with SLD on behaviour. Differences in teacher perceptions of SLD and NA student's behaviours were found on 14 of 21 items, favouring the NA students.

The teachers maintained anecdotal records based on observations. Data suggested reduced stigma for the SLD students in the inclusion classrooms.

4.6 Summary

The main purpose of this literature review was to gather information about possible models of classroom practices in inclusive settings and the effects of these approaches on pupils or peers. Several models were found to be more or less effective. These approaches will be discussed separately.

4.6.1 Co-operative teaching

In co-operative teaching settings, students with special needs are not pulled out of their classroom for supplemental instruction. Instead, the special education staff provides instruction in the regular classrooms, to increase learning time, reduce behaviour problems, give students an opportunity to participate fully in their classrooms, and teachers an opportunity to learn from each other. Co-operative teaching appears to be an effective strategy for students who are at risk of academic failure (Self, Benning, Marston and Magnusson, 1991). To improve communication and instruction skills, in-service training and co-operative planning is important. Scheduled meetings are considered to be of great importance for planning, problem solving and sharing instructional strategies. The division of responsibilities needs to be clear. Jenkins, Jewell, Leicester, Jenkins and Troutner (1991) report on a study in which the special education teachers sometimes 'felt like aides rather than teachers'.

4.6.2 Peer tutoring or co-operative learning

In most peer tutoring settings, students are assigned to heterogeneous ability pairs. During tutoring sessions, students read aloud and work on comprehensive activities after receiving reading instruction. Tutor–learner roles are reciprocal, and students give each other feedback. In most cases, students are assigned to teams. Peer tutoring programmes seem to be easy to

implement and any reading material can be used.

Peer tutoring has been proven to be an effective strategy in increasing the academic achievement of students with and without disabilities (Kamps, Barbetta, Leonard and Delquadri, 1994; Fuchs, Fuchs, Mathes and Simmons, 1997; Stevens and Slavin, 1995a, 1995b) and in increasing social interactions (Kamps, Barbetta, Leonard and Delquadri, 1994).

4.6.3 Curriculum based measurement

In curriculum based measurement (CBM) conditions, pupil progress is monitored using a computer program. Performances are weekly tested and results are entered into a computer program that summarizes performances in a graph. Both teachers and students are taught to interpret graphs. Teachers who use CBM appear to make more instructional adjustments than teachers who don't systematically monitor student's performances. The use of CBM does not directly lead to higher student achievement. To increase performances, the use of a computer program, which gives recommendations about instructional adjustments, appears to be essential. (Fuchs, Fuchs, Hamlett and Stecker, 1991; Fuchs, Fuchs, Hamlett, Phillips and Bentz, 1994).

4.6.4 Collaborative problem-solving

In a collaborative problem-solving (CPS) programme, students are asked to solve problems together whenever a physical, social or instructional exclusion of a student occurs. To create a climate of shared responsibility, students are encouraged to initiate the process themselves. During a CPS session, the teacher leads the students through the steps of a structured process; identifying the issue, discussing all possible solutions, screen solutions, choosing and evaluating the solution. CPS is judged to be an effective program to promote inclusion, and easy to implement according to the teaching staff (Salisbury, Evans and Palombaro, 1997).

4.6.5 Mixed designs

Many studies report on designs that combine several treatments. It is hard to determine the effects of the various components of these programmes.

Several models use co-operation as an overall approach to change the school organization and create a climate of shared responsibility. In addition to co-operative teaching and co-operative learning (e.g peer tutoring), parents are involved, teachers coach each other and teaching staff collaborates in instructional planning (Saint-Laurent, Dionne, Giasson, Royer, Simbard, and Piérard, 1998; Stevens and Slavin, 1995a, 1995b; Banerji and Dailey, 1995).

5 Country reviews

5.1 Introduction

This chapter contains the output of the literature reviews as conducted in the participating countries. The following countries have submitted reports:

- Austria
- Denmark
- Finland
- France
- Germany
- Greece
- Iceland
- Ireland
- Luxembourg
- The Netherlands
- Norway
- Portugal
- Sweden
- Switzerland
- United Kingdom

The following countries were not able to submit a literature review:

- Belgium, Flemish Community
- Belgium, French Community
- Italy
- Spain

5.2 Austria

Irene Moser, Working Partner Austria

5.2.1 Preface

Based on empirical research, this analysis attempts to give insight into the current situation in Austrian primary school classes, in which children with and without handicaps are being taught together.

The report starts out by picturing the prevailing conditions in the context of a timeline, starting with the trial period back in 1984, the realization of the legal foundations all the way through to the latest developments. This is followed by an in-depth look at the special aspects of mainstreaming and its prerequisites. In addition to that the support of children with miscellaneous handicaps as well as all the measures involved are described.

5.2.2 Framework

A group of Austrian experts in special needs education have been responsible for compiling the literature, which is mainly recent, dealing with this topic. Some of the listed publications, however, were written before 1995 (1981–94) and contain experiences and results dating back to the time of pilot projects testing inclusive practice in Austrian primary schools.

It was our intention to give a full and detailed picture of the situation. That's why the authors tried to consider all sorts of publications. Seminar papers written by pedagogic students are mentioned alongside articles in Austrian specialist journals, degree and doctoral dissertations, and of course publications by the Austrian Ministry of Education.

Descriptors or keywords like *inclusive teaching*, *primary school*, *team-teaching*, *analysis*, *co-operation*, *teacher for special needs*, *evaluation*, *study*, *handicap*, *differentiation*, *teaching preparation* and *computer* were used as code words in search of relevant works.

In searching for relevant literature it soon became obvious that Austrian experts are not as fond of publishing as for example their German colleagues and that the amount of relevant literature is comparatively small.

Comparative studies dealing with hard, scientific facts (which teaching method leads to which results?) do exist, but to our knowledge only to a certain extent. Another factor that might have led to a lesser scientific output at the end of the '90s is that inclusive teaching in primary school seems to be less of a key issue than it used to be just a few years ago. Other challenges are in the teachers' and parents' focus, for example inclusive teaching at secondary level or the transition between school and job, to name just a few.

Looking for relevant studies regarding special issues, such as teaching children with severely impaired vision and hearing, Down's syndrome etc., it turned out in the course of interviews with experts that unpublished studies actually exist, written as seminar papers or for use in the field of in-service training. Unfortunately, however, access to these papers can only be gained by personal contact with the authors.

The authors of these publications dealt with the topic in various ways, but most of all based on their personal experience in the job department.

Socio-political aspects of inclusive teaching, the effect of mainstreaming on society, theoretical treatises on the prevailing conditions concerning the inclusion of disabled and impaired children, scientific studies of the overall job satisfaction of involved teachers as well as teaching efficiency and the practical discussion of classroom work are offered.

The last mentioned publications put an emphasis on coping with specific situations in the classroom, for example the inclusion of children with impaired vision and hearing, Down's syndrome, behaviour problems or autistic syndrome, spastic paralysis, or cerebral impairments. Though most of these studies don't feature an empirical approach, they offer insight in the way of teaching and the way teachers in their opinion are able to cope with the challenges of inclusive teaching. That's why the attempt to register the full range of Austrian publications was given a comparatively large scope. A full-length version of the corresponding report in German can be ordered by e-mail (Irene.moser@kronline.at).

For the report to the European Agency, however, only studies applying a not too subjective point of view are invoked, thus eliminating nearly all the studies of actual teaching in the classroom, which only present a fraction of the overall development.

5.2.3 Legal framework for work in the classroom

Since 1993 local education boards have been advised to guarantee a framework for the inclusion of disabled children. According to the number of children and regional conditions the following organizational models can be offered.

5.2.3.1 *Inclusive classes*

On average inclusive classes contain 4–6 children with special needs and 17–20 non-disabled children, depending on the kind and grade of disability and the regional conditions. The class teacher is supported full time by a second teacher, thus enabling them to work as a team. The composition of a particular class is planned and decided by the LEA inspector in co-operation with the headmasters of the resource centre for special needs and the primary school.

5.2.3.2 *Supportive classes*

These classes contain a maximum of three children with special needs, consequently a second teacher is not present during the entire lessons. Each pupil is only supported during a limited amount of lessons. Furthermore the extent of support also depends on the number of disabled children per class, the type of disability and the regional situation. In these classes successful inclusive teaching is largely dependent on the teacher's skill. Another decisive factor is the amount of granted support, i.e. if it is sufficient to cope with the children's needs.

5.2.3.3 *Co-operative classes*

Co-operative classes are classes for children with special needs featuring joint lessons with primary schools (to the greatest possible extent). Frequently, however, this co-operation is limited to a few common projects, for example in subjects with a creative emphasis or shared school events.

Even before the law for inclusive teaching was passed in 1993, pilot projects had been carried out for almost ten years, to test several models. All these projects were intended to gain experience and finally legislate inclusive teaching in primary school.

5.2.4 Results of the pilot projects

In 1993 Specht developed a study questioning the framework of inclusive teaching. Throughout Austria teachers were interviewed regarding how many and what sort of children

they were teaching in their classes and if they were content with the prevailing conditions. The result clearly showed a preference for inclusive classes.

According to the teachers this model was best suited to cope with the children's needs, thus enhancing the social contacts between the children and facilitating teamwork.

A few negative aspects, however, were shown up, for example resistance on the part of teachers and parents, as this model required the most structural changes. Teaching in heterogeneous classes demands highly differentiated teaching, teamwork and a freer and more flexible organization of the lessons throughout, thus deviating from a number of traditional, deep-rooted teaching attitudes.

There was also some quite positive feedback on supportive classes integrating children with less severe learning disorders.

Teachers were very critical of co-operative classes as, first, they proved to be inappropriate to cope with children's needs and, secondly, the overall leitmotif of inclusive teaching, social integration, was virtually impossible to realize.

5.2.4.1 *Inclusive pedagogy*

Successful pedagogy for all children hardly differs from inclusive education, as is stated in an article by Wetzel, Moser, Brejcha *et al.* (1999).

The authors tried to figure out the variables of teaching quality. According to the *Classroom Environment Study* (Anderson, Ryan and Shapiro, 1989) and the *Scholastik Studie* (Weinert, 1997) following aspects of teaching quality in inclusive settings were pointed out and used as the basis for a scientific study on primary school children in Salzburg and Upper Austria: classroom management, problem-solving teaching, clear structure of teaching, time efficiency, individual support, variability and social climate.

After six years of inclusive teaching in primary school since legislation (at the time of the Salzburg study) the investigated schools in Salzburg and Upper Austria are able to meet these requirements to a certain degree. Compared to traditional classes inclusive settings show a much higher level of individualization. Furthermore it came out that work in these classes is done in a less teacher-centred, achievement-oriented way (with reference to the social climate) and more support-oriented way. Moreover teaching methods in inclusive settings actually vary to a larger extent.

In 'stressed' primary school settings with a higher proportion of children with behaviour problems or children whose mother tongue is not German, differentiated teaching in the investigated classes was less frequent, especially if the children had learning disorders or were, although not actually disabled, not far from it.

At the same time it turned out that alternative teaching is not necessarily superior to traditional teaching methods. If primary school teachers are not sufficiently acquainted with alternative teaching techniques, a traditional way of teaching may very well be more efficient and stabilizing for under-achievers in the sense of non-exclusion. The clearer the organizational framework is structured by teachers, the less children at risk are statemented, although it has to be emphasized that primary school teachers usually have to cope with up to 30 children and, in contrast to inclusive settings, the necessity of teaching in a more open way doesn't seem as obvious to the teachers.

It seems that teaching methods facilitate inclusive teaching, or, seen from another point of view, working in a team and teaching children with special needs require individualized, project-centred teaching, otherwise it wouldn't work out at all.

Applying the SACERS instruments (School-Age Care Environment Rating Scale), the observers tried to assess peer activities, support inclination and communication between teachers and learners. The results speak in favour of individual support for children at risk and increased teamwork from all those involved in the classroom.

Integration in Vorarlberg was researched by students of the University of Innsbruck in inclusive classes and supportive classes at 29 locations (Dür and Scheidbach, 1995). There are, however, no comparative data to traditional classes.

According to their findings neither teachers in inclusive classes nor in supportive classes were applying teacher-centred teaching exclusively. Periods of self-access learning and a so-called 'morning circle' (a kind of assembly) ranked high in inclusive settings, project-centred was less frequent with Vorarlberg's teachers in 1995. As mentioned earlier on, alternative teaching methods (especially Montessori and Freinet) are the basis or at least part of the teaching vocabulary of all teachers involved.

5.2.5 Teamwork

In 1995 (Dür and Scheidbach) nearly all teachers in an inclusive setting were working in a team, with one third of them in favour of shared responsibility for all children. In the remaining classes care for the children was limited to support of children with special needs, with one half of the teachers taking care of the individual locations for just a few lessons per week. Sharing competences in a supportive setting is, according to my experience as a counsellor, organized in a much stricter way, leaving support of children with special needs to teachers with the relevant certificate alone.

Dür and Scheidbach stated that approximately one half of all interviewed teachers really appreciated team-teaching. They were especially in favour of the following aspects:

- relief of teachers through shared work in the classroom;
- more control of periods of self-access learning;
- shared responsibility;
- increased self-assessment;
- benefit from different points of view.

(Dür and Scheidbach, 1995, p. 14)

Thirty-five teachers in Salzburg, working mainly as supportive teachers, reflected on the topic in the course of an interview and confirmed these criteria for functioning teamwork (Burmann and Moser, 1998).

In addition to personal commitment, open-mindedness, tolerance, readiness to accept and express criticism, flexibility and personal attitude were mentioned. Moreover the personal benefit from working in a team was again emphasized, stimulating the exchange of ideas and learning from each other.

Though most teachers stated that teamwork was quite time-consuming, increased job satisfaction made it all worthwhile. Two-thirds of all interviewed teachers were of the opinion that it was all the more fun, worked out fine and the actually increased commitment was received well by both learners and parents.

This result of a local interview confirms the results of Specht's study of the relevant pilot projects in which he stated that the stimulus of teamwork was appreciated by most teachers enhancing their overall job satisfaction (Specht, 1993, p. 39).

5.2.6 Integration of children with behaviour problems

Social deprivation in the parental home, a child's absence from school, aggression during lessons and breaks, bullying of other children on the way to and from school and minimal achievements in spite of intelligence are a reality with which lots of teachers are confronted.

In Austria counselling teachers support children, parents and teachers without labelling them as children with special needs. Only if the problems are getting more and more critical, and support by remedial teachers is not sufficient any more, will the authorities take measures to the benefit of these learners. A relevant statement is a prerequisite for attending an inclusive setting or a school for children with special needs.

Despite all the steps that are taken, success can't be granted, as these children do need a lot of attention and sometimes drive their teachers close to the edge.

By applying Haeberlin's tools and sociograms Lughofer (1996) tried to find out if pupils with behaviour problems (75% of them being male!) felt themselves integrated in Upper Austrian classes. Moreover, she asked teachers working in several settings (special schools, inclusive classes, supportive classes) how they assessed the integration of these children.

Without a doubt, the analysis of these 22 pupils' situation shows that they encounter much worse conditions if they are taught together with other disabled children. Children with Down's syndrome or other disabilities are more popular with their classmates. Needless to say the accumulation of miscellaneous problems stresses out the teachers to an enormous degree. According to these findings, Lughofer presses for consequences, for example taking this fact in account when putting together a new class.

In this study, supportive teachers do relatively well in terms of integration. The author suspects a high correlation between the grade of disability and the allocation of a child to a particular setting. In other words, children with slight social disorders are looked after quite well by supportive teachers. This statement, however, still requires further evidence and support.

When assessing integration, special schools are at the bottom of the pile, as interviewed learners feel least integrated in this kind of setting.

5.2.7 Summary of findings

In Austria, children with special needs are taught in inclusive settings (4–6 children with special needs in mainstream classes), in supportive classes (a maximum of 3 children with special needs per class) or co-operative classes (regular classes co-operate with special school classes).

After a 10-year trial period and an experience of 8 years of inclusive teaching in primary and secondary schools on a legal basis, it is evident that inclusive teaching works best in inclusive settings and supportive classes.

In these classes teachers work in a team, prepare the lessons together and deal with the daily work as equal partners, but with a different allocation of roles.

The relief of the individual teachers through shared work in class, enhanced control of periods of self-access learning, shared responsibility, increased self-assessment and benefiting from different points of view are appreciated by most teachers. It's obvious that working in this way is more time-consuming than teaching regular classes.

New teaching and learning ideas, such as differentiated teaching, work according to a weekly schedule, 'open' learning and other methods of alternative teaching, like Montessori pedagogy, Jena Plan, Freinet pedagogy etc., are increasingly being employed.

Integration of children with behaviour problems seems to be the greatest challenge for everybody involved when it comes to inclusive teaching. Despite all efforts in the way of support (remedial teachers, who additionally work with the children once or twice a week and counsel the class teachers) integrating these students still seems to be a burden for the teachers.

By creating interdisciplinary linkups (co-operation with teachers, counselling institutions, psychologist and therapists, doctors, regional clubs etc.), teamwork at school and the application of particular methods of that deal specifically with social disorders (morning circle, class assembly, Gestalt psychology, social games, therapeutic painting or musical therapy, rewarding systems like tokens, clear sets of rules etc.) in addition to granting a special framework of resources (limited number of children per class, avoiding too many different disabilities in one class, a two-teacher system throughout) we may eventually succeed in integrating children with behaviour problems.

Since the middle of the 1980s the integration of sensory impaired children has come a long way. Visually and auditory impaired children are taken care of by remedial teachers (special teachers with an additional training) for some lessons per week, tackling personal and technical matters.

When it comes to integrating children with auditory problems, we need to emphasize a number of prerequisites. Sound insulated rooms, additional material (especially pictures), technical equipment (hearing aids, microphones), and a basic knowledge of deaf-and-thumb language on the teachers' part are especially recommended. Just as in other inclusive settings, teachers report on the successful use of new and/or alternative teaching methods, the inclusion of new media (computer supported teaching as a didactic and therapeutic remedy) and the necessity of intense co-operation with parents of disabled and non-disabled children alike.

The integration of children with autistic syndrome was well reviewed by interdisciplinary Austrian study groups. The successful teamwork between schools, autistic institutions, parents and hospitals as well as the commitment of the teachers were especially emphasized. In addition to that they put a stress on the vital provision of special resources, as children with autistic syndrome definitely need more individual tuition. Planning in advance, backing from student trainees, supervision and in-service training are especially appreciated by all teachers involved.

In the classroom teachers often make use of self-access learning and try to support all children by differentiating and adapting the syllabus (individual support plan).

5.2.8 Brief analysis

Generally speaking, the following factors of successful inclusive teaching can be analysed:

1. provision of sufficient resources, tailored to the needs of disabled children;
2. linking up with interdisciplinary institutions and most of all, co-operation with parents;
3. application of new methods of teaching and learning, individualized or project-centred teaching on the basis of individualized support plans;
4. teamwork of all teachers as equal partners, with a different allocation of roles;
5. making use of experts (specially trained teachers or therapists) as support for inclusive teams in schools.

The Austrian document analysis is presented in Appendix B.

5.3 Denmark

Poul Erik Pagaard, Working Partner Denmark

5.3.1 Introduction

Approximately 80,000 pupils, or 12–13% of the total number of pupils, in the Danish *Folkeskole* (primary and lower-secondary school) receive special education for shorter or longer periods of a school year (1998/99). Of these, approx. 10,000 are educated in segregated settings, 6,000 attend special classes in mainstream schools and 4,000 attend special schools. The percentage of pupils in segregated settings is approx. 1.7% – approx. 0.7% in special schools and 1% in special classes in mainstream schools. This means that approx. 70,000 pupils receive special education supplementary to normal education.

The *Folkeskole* comprises 60,000 teachers. It is not clear how many of those are involved in special education.

No special education will be carried through without a preceding pedagogical-psychological assessment and additional proposals for provisions, elaborated by the local Pedagogical-Psychological Advice Office (PPR).

5.3.2 Initiatives aiming to reduce the extent of special education

When elaborating the provisions/resolutions it is implied that special education is only implemented if it is impossible to deal with difficulties within the terms of reference for normal education. It is also implied that schools must seek to prevent pupils from having difficulties in school to the greatest extent possible. Therefore, normal education in the *Folkeskole* must be organized, within the given resources, so that all pupils get optimum possibilities for development, including those with individual difficulties and weaknesses and those with functional differences.

Concrete initiatives in order to prevent difficulties in schools could be:

1. Activities comprising Danish language and maths could be introduced in pre-school classes (kindergarten classes) and along with school start.

   Within lower secondary education (pupils in their final years of the *Folkeskole*) tests can be totally or partly left out of educational programmes. Theory and practice can be combined in education that takes place inside or outside school. Furthermore, primary and lower secondary education and youth education (education for young people right after the *Folkeskole*) can be combined in a way so that parts of approved youth education and parts of 10th grade are included in the educational programme.

2. In many cases, temporary assistance given to a pupil can prevent minor educational problems from developing into real learning disabilities requiring special education.

   The provision aims at pupils having difficulties in following normal class education – especially Danish lessons – because they need more time than other pupils to acquire knowledge etc.

   In some cases parents can meet with those difficulties by supporting the educational programme at home. But for other pupils this is not the case and supplementary lessons offered by the school can be necessary for a shorter period.

Furthermore, the school is obliged to establish supplementary education for pupils who have temporary difficulties in following normal education in one or more subjects because:

(a) they have not received education for a longer period because of illness, living abroad or the like, or

(b) they have been transferred from another school whose educational programme regarding content and methods of the subject differs from the programme in the new school.

If necessary, it is also possible to establish supplementary education for pupils in the first year of compulsory schooling, i.e. pupils who have not followed the educational programme set out in pre-school in connection with school start.

The possibility of establishing supplementary education must not lead to less educational differentiation in the classroom – considering individual pupil differences and learning conditions.

Decisions about supplementary education are taken by the head teacher after the consent of the parents and in consultation with the class teachers.

The provision of supplementary education includes bilingual pupils.

3. Pupils whose needs cannot be met in full within the framework of mainstream education, including supplementary education, must be referred to special education or other special pedagogical support according to the provisions set out in the regulation.

   It is emphasized in the regulation that the special education must be of a very different nature and content.

5.3.3 Differentiation of education

As laid out in Article 18 of the Act on primary and lower secondary education (the act on the *Folkeskole*) it is the obligation of all teachers to differentiate their teaching to the highest extent possible, according to each pupil's needs.

Therefore, special support must take its starting point in normal education and be provided in such a way that the principle of least possible intervention is applied and tested before more extensive intervention is applied, if necessary.

If a teacher finds that his or her own possibilities to differentiate the education are 'used up', advising and consulting should be offered to him or her. This could be offered by the pedagogical-psychological services (PPR) or others with special knowledge and experience in the field of differentiation and individual teaching.

The efforts of the *Folkeskole* to ensure appropriate education of pupils whose development demands special support thus range from an extraordinary differentiation of education to special education replacing normal education in one or more subjects, and perhaps all subjects.

5.3.4 Special education

In Denmark we often refer to the '85-13-2-model', briefly outlined as:

1. normal education broadly covering 85% of the pupils doing well;
2. special education that grows out of normal education, comprising approx. 13% of the pupils; and
3. special education requiring special methods, materials and resources, special teacher qualifications and individual curricula, comprising approx. 2% of the weakest pupils.

5.3.5 Methodology

In co-operation with a research librarian at the National Danish Library of Education and a professor at the Royal Danish School of Educational Studies I have ordered a retrieval of relevant database. We searched for:

> Danish materials **and** materials published after 1990 **and** primary and lower secondary level **and** pupils with special needs **or** pupils with behaviour problems **or** pupils integrated in normal schools **not** migrant pupils **and** teacher activities **or** pupil activities **or** research **or** survey **or** didactic method **or** teaching method.

This procedure resulted in about 300 hits. After looking at the material and adding a new condition:

> pupil outcome

the amount was reduced to 10. After the selection given the restrictions entailed in the framework for this study, only two documents were found that fit the criteria.

5.3.6 Which groups of students cause most problems?

We do not have enough knowledge about this, but we know that it is often difficult to include deaf pupils and pupils with serious behavioural problems and mental/intellectual disabilities in mainstream classes.

5.3.7 Summary: what works?

We do not have enough knowledge of this either, but we hope to learn from the new project dealing with quality development and put forward by the Danish Ministry of Education at the end of 2000. The aim of the programme is to enhance the quality of education and counselling of pupils with profound special educational needs. The project should place a new view on the concept of special education and comprises a number of themes. Some of the main themes are:

- special education in schools – here the general development of the way their education is organized and implemented should be reflected in the implementation of special education;
- an increased amount of counselling to schools will be necessary as schools have to undertake more tasks;

- the application of technology in various forms of schools and the effect that this may have in terms of improved communication between severely disabled pupils, as a means of information search, independent working and co-operation between pupils.

The possibilities of participating in KVIS – Quality Project in Special Education (*Kvalitetsprojektet i Specialundervisningen*) will be announced at the end of 2000. The programme will focus on a number of themes, such as the elaboration and implementation of individual education plans, collaboration between parents and school, school management and teacher qualifications, transition from primary and lower secondary education to higher education and employment, co-ordination of school and free time provision, allocation of responsibility and tasks and dissemination of knowledge.

The new approach will be evaluated after three years.

For the literature review see Appendix C.

5.4 Finland

Eero Nurminen, Working Partner Finland

5.4.1 Introduction

The new school legislation guarantees children's and young people's right to high-quality teaching and offers a flexible framework for developing and diversifying education. Basic education forms the foundation for equal opportunity in education and further studies. The most important factor in the implementation of basic educational security is that there are no great differences in teaching, learning and educational outcome between different education providers and schools. Evaluation methods, criteria and learning standards will be developed to identify such differences.

According to law, a pupil with slight difficulties in learning or adjusting has the right to receive special education in connection with other instruction. This is called part-time special education and it is mainly offered to children suffering from speech, reading and writing disorders. If various support measures are not sufficient to eliminate a pupil's learning and adjustment difficulties, he or she may be admitted or transferred entirely to special education. Syllabi must be set individually for each student and a personal curriculum must be prepared for him/her. In autumn 1998 a good half of those transferred to special education were in special schools.

The first alternative of providing special education is to integrate pupils with special education needs into mainstream classes and, when necessary, provide special education for a special group, class or school.

The very high share (17.6% in 1998) of special needs education pupils in the comprehensive school in Finland derives from the fact that all children suffering from speech, reading and writing disorders have been taken into part-time special instruction as early as possible. They account for 80% of all special needs education pupils, the rest being transferred to special education. So the Finnish tradition of special needs education was created rather early as a part of the comprehensive school system. The classroom practices developed according to the prevailing school space and physical environments. As special education advanced, it affected the physical environments modifying them for the purposes of special needs education.

Classroom practice issues have not been dominating in the Finnish research literature of special education. The teacher’s role and co-operation, principles of integration and inclusion, teaching of special needs pupils in mainstream classes and individual syllabi have been the prevailing research problems during the last decade.

5.4.2 Review of the literature

A study by Heikki Happonen (1998) classifies and evaluates the state of physical special education environments in Finland since 1921.

The purpose of the study was to investigate the historical, typological and evaluated state of physical special education environments in Finland. The historical state of special education environments was examined by analysing the writings related to special education and school environments in pedagogical journals. The currently used special education teaching environments were examined by creating a typology, which was then also evaluated.

According to the results, the special education environments developed before the compulsory school, outside the folk school system. At first they were developed out of philanthropic interest but later they were supported by the state. In general the environments had not been planned to be used as schools, but the environments were soon modified to fit the needs of users. In the compulsory school, during the period 1921–44, the special education environments and classroom practices developed together with the special education system. The school buildings, their quality and special features, were not of primary importance, seen from the viewpoints of the school system and special education. It was more important that special education was created within the school system. The period was characterised as one of emerging special education and relational learning environments.

In the postwar period (1945–69) special education environments were paid attention to as part of the primary school system. At the national level the integration of special education into the school system could be seen in committee reports. The physical environment needs of special education were included in the standard price system, and the network of special schools was greatly expanded. However, the position of special schools in the school system was still rather loosely defined. Special schools were often located in former school buildings that were no longer used, in school buildings far away from other schools, and in buildings that had not originally been built for schools. In compulsory schools a special education environment was supplied by school authorities up to the year 1960, i.e. special educators were not involved in the process. The position of special education was stabilized in 1960 when the first school that was planned for special education was built. During this period new schools were built for special education, often as part of a larger school complex. The period was characterised as the period of integration into school system and that of relational-functional learning environments.

In the period of the comprehensive school (1970–) attention was paid to special education and its school environments in committees and in research. In addition to special classes, part-time special education developed, which became the major form of special education, if defined in terms of student numbers. The part-time special education had to undergo the same stages of development as special class education. The integration of this form of special education into the school system was more important than the teaching environments. Consequently, special education was organized in diverse, and often poor learning environments. In the 1990s the emphasis in special education moved to special classes. The era was characterised as the period of well-established special education and functional learning environments.

The teaching premises of special education were classified, in this study, into six categories or types. A special class typology includes the following types: traditional, functional, therapeutic, group work, communication, and control types. One-third of the classes were traditional and about half of them were functional and therapeutic. The teaching environments of part-time special education were grouped into small-group, functional-therapeutic, clinical-pedagogical, shared-activities, and consultation types. All teaching environments in the upper stage of the comprehensive school fell into the group work category. In town schools the lower stage teaching environments were typically functional-therapeutic. In the countryside the special education environments were classified as shared-activities ones. The functional-therapeutic type of environment emerged as the ideal type for part-time special education. The most common environments used in special class education were therapeutic, traditional, control and communication types. The therapeutic type appeared

as the ideal type for special class instruction.

Parents' experiences of the placement of children with disabilities in regular education classes have been investigated by Satu Huhtamäki (1997). Six of eight children have Down's syndrome. The most important finding was the parents' overall contentment with the placement. The children's satisfaction as well as the advantages of such placement were also reflected in the parents' attitudes. Most of the parents' negative experiences of the process of placement arose from the negative attitudes shown by some administrators towards placement of this kind.

A study by Irja Jylhä (1998) was based on a visual arts instruction experiment implemented as action research and utilizing the method of co-operative learning. Altogether, five special education pupils and one primary-school class (i.e. a class of the lower stage of the comprehensive school) participated in the study. The participating intellectually disabled were classified as having a mild or medium disability. At the beginning of the two-year experiment, the primary school pupils were on third grade.

On the basis of their interactive skills, the groups could be divided into four categories: co-operative, disintegrating, tutor-managed and integrative. The process of interpretation brought forward the following main themes for the study: towards equality, accepted and rejected, disruptive pupils, and challenges to instruction.

Sanna Pöyhönen (1997) has investigated social inclusion in the classroom community of special needs pupils placed in a regular class. Special needs pupils who were taught mainly in the same space as their classmates interacted with other children both during lessons and recesses. Children without disabilities seemed to accept the special needs pupils although their attitude was somewhat different from the way they reacted to each other. A classroom where each pupil could advance at his or her own pace seemed to be the most favorable study environment in view of the social inclusion of special needs student in the classroom community.

Kristina Ström (1996) states that the teacher and pupil welfare agent roles are the predominant components in the special education teacher's professional role. The teacher dominance of the professional role is related to the focus on remedial and individual education. The teacher requires not only qualifications but also authority to work at the individual as well as at the group, school and community level.

The Finnish document analysis is presented in Appendix D.

5.5 France

J. Seknadjé-Askénazi, Professor in the National Centre for Scholastic Adaptation and Integration

5.5.1 Introduction and methodology

The work proposed by the European Agency consisted of an examination of the recent literature devoted to the methods used in integrating classes in France. The aim was to define broad guidelines and to compare them with those of other countries of the European Community. An initial examination of the standard publications led us to:

- observe many editorial 'blank pages' (e.g. either an absence of or too few publications in some sectors and insufficiently reliable works concerning other sectors);
- attempt to compensate for the difficulty that these blank pages represent by adding video documents and qualitative or critical analyses to the standard publications available;
- define the position of the methods currently used in France on the basis of a transversal inventory of the documentation thus gathered.[1]

However, a comparison with the initial reports supplied by other countries of the European Community showed[2] that this work was not sufficiently situated in its context.

During the second stage we have therefore fine-tuned the present report. We have obtained concrete indicators and thus documents directly related to classroom methods, using analytical documents only to examine the 'blank pages' left by the descriptive documents.

A twofold difficulty nonetheless remains:

1. reference to 'inclusive education', which serves as a general counterpoint to the European Agency, is only partially transposable (even though the term 'inclusive education', which sounds strange to a French ear, is becoming more and more widely used), and in France refers to three trends: educational integration, inclusion and lastly adaptation of methods (educational, pedagogical, and formative);[3]
2. the preferred French approach is neither empirical nor essentially descriptive: it is more analytical or even evaluative.

[1] The classification and analysis of this documentation was mainly carried out by the personnel of the CNEFEI research centre, headed by Marie-Hélène Pons.

[2] July 2000.

[3] Much further: to 'special educational needs', which have become standard terms in Europe, France still prefers a serialized terminology (*pupils in difficulty*, *disabled pupils*).

5.5.2 Integrating classroom practice: evaluating cognitive/behavioural/social effects

Let us briefly summarize the main institutional changes that have led to the present situation.

1975	It was decided that the right to education of disabled pupils should not remain just a hollow phrase; it had to be materialized in real initiatives allowing the maintaining of disabled pupils in a normal educational environment insofar as the nature of the disability made this possible
1982–83	The integration of disabled pupils was made a guiding principle
1990s	'Assistance networks' were set up which were designed to co-ordinate assistance to pupils in difficulty whenever necessary; educational integration classes were set up and developed in at the primary school level
End of 1990s	Development of follow-up services and care services at the pupils' homes aimed at making it easier to keep disabled pupils in a normal environment

5.5.3 Integrating classroom practices : evaluation of cognitive effects

Examination of recent literature devoted to this question confirms that the attention given to teachers of 'normal' classes to specific needs of pupils from 4 to 7 years old who are learning basic skills produces significant effects:

- keeping pupils in a class-group in which learning is progressive generally benefits even pupils with the greatest difficulties;
- work of network teams with teachers of 'normal' classes produces a globally positive effect in adapting educational initiatives;
- work of follow-up services allows disabled pupils in normal classes or in programmes where there is both integration in normal classes and follow-up by a specialized educator to develop appreciable skills. Whenever integration is experienced as not purely 'social' (inclusion in a peer group) and includes a real educational dimension (inclusion in a learning group), the consequences can be evaluated.

5.5.4 Integrating classroom practices: evaluation of behavioural and social effects

Maintaining inclusion in the peer group leads to the general effect of increasing the level of the child's communication and awareness of his or her social environment. At the same time contact between the child and other children of the same age in a classroom and/or educational situation, as well as the attention given to individual children in the group, seems to have a regulating and balancing impact. This impact is particularly striking in the framework of preventive action in nursery school, where the combined attention given to language and socialization is pronounced. But this idea must be qualified when we are speaking of pupils from 6 to 12 years old who are learning basic skills, and we must take into account two observations which recur rather frequently in publications that deal with this question:

- when major teamwork is not carried out, some pupils suffering from communicational

and behavioural problems might feel that they are rejected by the other children;

- when dealing with these children, some teachers in normal classes – or even integration classes – sometimes have the impression that educating children with these problems in classrooms is not really effective, and that it would be better, medium-term, to propose separate specialized education. This can happen even in the context of real work with a multiple-skill team.

5.5.5 The main problems

We must be aware of a major initial difficulty, which is not at all due to the pupils themselves, but to a dominant perception of how the educational system operates: teachers too often associate integrating practices with the idea that education is based on *a class, a place, a group, a responsibility.*

In other words, despite their good will, many teachers suffer considerably from this differentiation as soon as it reaches the threshold at which the permanence of the class-group or sense of full responsibility for the group seem to be threatened. Work with a multiple-skill team (network or service) is then experienced as a threat, and perceived in a contradictory way. Co-ordination of skills is still desired, but collective work is sometimes rejected in favour of a model in which multiple educational initiatives are privileged, whereas, when the multiple initiative approach is put into practice, it is criticized – and rightly so – by some authors. The criticism is that these specific separate educational initiatives dilute the belonging of the child to a group, and the belonging of the pupil to his class.

The second problem mentioned by the publications examined seems paradoxically to stem from the positive impact of integrating practices, concerning children from 3 to 7 years of age. Some pupils who are pushed to their maximum learning capacity, their maximum maturity and capacity for socialization, reveal their limits between the ages of 8 and 12. They have trouble developing minimal autonomy in work, or developing satisfactory pre-adolescent communication, or sometimes both. Many teachers of pupils in that age bracket describe situations in which, in the absence of specialized educators, they admit that they are unable (sometimes in spite of their experience) to maintain true inclusion for pupils in a situation of failure. We can also mention some experiences of teachers related to the number of pupils in a class. But we have trouble determining whether this is a return to the traditional idea that 'the fewer pupils you have the easier it is to differentiate', or whether it is a characteristic peculiar to the situation mentioned.

Thirdly, let us now define the educational concept of difficulty and handicap, related to the conception of the pupil–subject relationship. In a relatively large number of publications or documents, emphasis is placed on the child's instrumental skills, including in communication. It is thus not surprising that integration methods sometimes run into difficulties when the question of intersubjective relationships is minimized. But we cannot determine, as this is a transversal inventory of practices, where the cleavage is in terms of skills – what type of disabilities or problems would important questions really raise? And we cannot determine where it is located in terms of difference (when the aim is to restore, behind the question of performance, dialogue with the skills of the pupil).

A fourth point is the availability of appropriate equipment or conditions for children with major motor or sensory deficits. We have noted several reports of situations in which the improvement of practical conditions for inclusion seems to be an important or even decisive

factor. Above and beyond the providing of necessary equipment, would improved practical conditions lead to a (desirable) strengthening of teachers' feeling that they are being supported institutionally?

5.5.6 With what types or groups of pupils are these problems significant or do these problems remain significant?

Two major facts should be noted. The first one will surely not surprise very many people, namely the fact that difficulties are considered as more significant when the behaviour of the child manifests an apparent component of refusal, withdrawal, or opposition. Generally speaking, educators – even specialized ones – usually find it easier to deal with a strongly inhibited child than to bring about the inclusion of an aggressive one. Beyond the question of real skills, attested by several descriptions of actual functioning, we might believe that teachers partially inhibit their possible role in the face of an absence of involvement or an attitude of opposition experienced as discouraging and destabilizing.

The second fact is probably a corollary of the previous one, even though it is mentioned less often: the socio-cultural level (more particularly cultural) of the family and its relationship to teachers plays a certain role in the implementation of inclusion methods by teaching and educational teams. Roughly speaking, it seems as if it is easier to focus on the integration of a child if his family shows interest and support, and shares a common language with the educators.

5.5.7 Summary: ‘ what produces results?’

We believe that the cross-references used make it possible to isolate three major factors. First of all, at the same time as the problems mentioned above, the need for work in true partnerships, combining the skills of teachers in normal classes with those of specialized educators. There is also a need for work based on shared responsibilities which does not make teachers of normal classes dependent on specialized educators.

Then – and this is less obvious – the role of parents as integrative ‘stimulators’ is important.

Lastly, and this is paradoxical, there is the feeling of competence on the part of personnel involved in integration or inclusion. Indeed, we have observed that where classroom methods were implemented by persons convinced of their ability to deal with these difficulties, such difficulties were described as less ‘exhausting’. This made possible a process during which the child makes his own behavioural and cognitive efforts when he perceives the efforts to achieve adaptation and differentiation which are devoted to him.

One question remains, however: does this feeling of competence include, beyond the variable of technical competence, a significant personal component? Or does pedagogical or educational training in the specific sense constitute its essential source?

The French document analysis is presented in Appendix E. These documents are also available in the French language through the author of this chapter: J. Seknadjé-Askénazi, Professor in the National Centre for Scholastic Adaptation and Integration, e-mail: Rédaction NRAIS <cnefei-nrais@ac-versailles.fr>

5.6 Germany

Anette Hausotter, Working Partner Germany, and Prof. Dr Ulf Preuss-Lausitz[4]

5.6.1 Introduction

Inclusive education/integration which is the responsibility of the Ministries of Education of the different *Bundesländer*, was mainly accompanied by scientific investigation in Germany during the first phases. Most of these investigations are now completed. The state of inclusive education is still very different at the 16 *Bundesländer*: the proportion of integrated pupils – compared to children at special schools – varies between 5% and 25%.

Knowledge about practice of inclusive education is based on quantitative empirical studies, case studies of individual children or instruction observation. The general approach in the integrated didactics is also based on long-standing observations of the teaching in those so-called integrated classes.

Inclusive education often takes place in integrated classes. These classes have a smaller size than usual and contain a few students with SEN. In addition to the mainstream teacher there are lessons supported by a special teacher. Both of them usually teach together inside the classroom – not in special groups. The class size is in most cases 20–23 pupils, including 1–3 children with SEN. More rarely there are classes of 15 pupils, including 5 or more pupils with SEN (and full team teaching). Children with vision, hearing and physical impairment as well as children with autistic syndrome are mostly integrated in so-called 'single integration' or individual integration.

In general the educational system provides integration measures; this might be for example through joint education in integrated classes in mainstream schools, individual integration of only one SEN pupil, support of SEN pupils with co-operation between a mainstream and special school.

Concerning integration, the most problematic situations arise with students with behaviour problems (and not necessarily those who are officially labelled as 'integrated students'). Some parents choose integrated classes because they are aware of the problems of their child, but they don't want to make it official. For the teacher the problem arises that they don't get any additional support for those children. Problems of integration and the changing of didactic approaches are usually greater at secondary than at primary school level.

One of the biggest challenges within inclusive education is team-teaching: teachers have not learned it during their initial training. How to deal with a heterogeneous learning group (e.g. teach with working-plans, with projects, how to write individual educational plans, to change the structure of mainstream school, more open and flexible learning). These are problems for all teachers, both special and mainstream teachers. Teacher training has to develop more in this direction.

Information about effective didactic methodical approaches can be found in almost all reports. They generally report:

- project work;
- automatic and self-controlling instruction;
- partner work (peer tutoring);

[4] Tim Levenson provided support in the translation of this chapter.

- differentiation;
- elaboration of the class social rules; and
- learning evolution reports as typical for integrated education.

Below an overview is given of the elements of instruction in inclusive settings that are supposed to be effective. These are based on the analysis of the reports of the projects and on the scientific observations of integrative classes. The following sequence does not imply any order of precedence.

5.6.2 Engagement of teachers, other personnel and teamwork

Special pedagogues and common teachers should generally keep an open mind for differences in the learning suppositions, and should not have any emotional problems concerning pupils who need nursing, physically handicapped pupils or pupils with any other disorders (basic attitude for integration). This also holds for the administrative staff of a school. Special pedagogues and common teachers of a class should meet at least once a week to evaluate last week's work and to plan the next week together. In larger intervals it would be good to organize grade meetings for all pedagogues and their assistants who work in one grade.

5.6.3 Co-operation with parents and other people

Good integrative instruction is always open for critical questions asked by parents of both handicapped and non-handicapped children. This co-operation must take place on the basis of equality. The same holds for the co-operation concerning other experts who work for handicapped children and their families (therapists, school psychologists, family aids, doctors, youth welfare officers, welfare officers for the handicapped etc.).

5.6.4 Equipment

It makes sense to give schools an idea of what they need before they make a decision for or against inclusion. This should be based on realistic situations. Both additional personnel and material costs should be covered.

The conveniences are designated as favourable if they allow flexible (group-) lessons (flexible furniture, enough large rooms, if needed, the inclusion of halls or corridors and other areas). For physically handicapped people, of course, the appropriate equipment of stairs, toilets, common door widths and classrooms is necessary.

5.6.5 Anchorage of special pedagogues

Special pedagogues should spend at least half of their working time in a common school, and at best be anchored completely to their teaching staff. They should be involved in all rights and duties in the same way as other teachers (e.g. the supervision of pupils, conferences, the attendance of special tasks etc.). Their instructive work should normally take place in mainstream classes and not separately in group rooms. Occasionally children without clear special educational needs should also be included in the special instruction.

5.6.6 Flexible, differentiating instruction

During the lessons the teacher should differentiate according to the pupils´ achievements, time and interest. Differentiating implies the usage of differentiated material and the admission of different goals (internal differentiation). Differentiation according to time allows different working paces; in this case, it is sensible to work within a weekly plan and to organize the daily work more flexibly beyond the fixed 45-minute lesson. Differentiation according to interest implies that all children (including those with special educational needs), single or in small groups, can carry out different projects that are not necessarily assigned to the curriculum. However, this can only be allowed under the condition that the projects´ results are regularly introduced to and discussed with the learning group.

5.6.7 Concentration and relaxation

Phases of concentration and relaxation, of cognitive and physical work, of aesthetic presentation (singing, moving, acting) and quiet work, working alone and working in the group, should always vary and alternate during the school day. The same goes for different kinds of plenary work (teacher lectures, pupil lectures, playing, singing, celebrating etc.). This also includes a flexible handling of time.

5.6.8 Evaluation

Children with special educational needs should receive regular feedback about their learning development, just as their other schoolmates do. In doing so, two standards should operate: as an individual standard, in reaching or not reaching the learning goal (with the reference standard: individual learning development); as an external standard, the respective curricular requirement or the teacher's requirement can both be valid.

The evaluation must not only refer to the usual scholar achievements, but should also always consider the aims included in the remedial plan.

5.6.9 Curriculum framework

The curriculum framework of the respective mainstream school and those of the corresponding school for special education are integrated in good integration classes: diverging or additional aims are included in the common framework in the respective grades in the respective subject or learning area. The curriculum frameworks that were separated are now bundled, also to give all teachers a summary of the learning (objects). Parents should be informed about the learning objects.

5.6.10 Plans for support

Plans for support should exist for all children with special educational needs. They should be discussed and improved at regular intervals within the team of all involved people, possibly including other external experts (therapists, psychologists etc.). This does not need to be only on special occasions. The best possible interval would be every three months.

5.6.11 Counsel

For all teachers who work in integration classes, but also for all parents, there should exist a counsel system. This counsel system can be established not only to serve a single school but also to serve other schools in the region. It can only exist if it keeps its institutional independence (i.e. it should not be part of a special institution) and should include a mixture of subjects ('multi-professional team').

5.6.12 Training and further training

All teachers should already have experienced basic knowledge of integrative instruction during their initial training. They should be offered further training possibilities permanently while teaching integration classes. If yearly working times (YWT) for the teachers are established, further training for those who work in an integration class should on the one hand be binding to a certain extent; on the other hand this training would be creditable within the YWT.

Supervision could also be offered as a type of further training. Regional working teams of several teachers of integration classes have also proved to be worth while, because here problems are not discussed within a hierarchy. These working teams could be attended by the counsel institutions.

The German document analysis is presented in Appendix F.

5.7 Greece

Antigoni Faragoulitaki, Working Partner Greece, and Markakis Emmanuel, Pedagogical Institute, Department of Special Education

Primary education teachers in Greece have practised innovative applications – on their own initiative – as good examples of classroom practice, but unfortunately there has not been a mechanism until now which might register and evaluate the quality of the programmes. However, a new National Project of the Directorate of Special Education of the Ministry is currently in the phase of developing a favourite digital environment (Databank of Special Education) which, among others, will encourage teachers to exchange good examples for the benefit of pupils with special educational needs. These curricula will be on line hopefully until the end of year 2000 and will be presented at the home address of the databank: http://www.dea.gr

It is strongly believed that this infrastructure will present effective results in classroom practice, taking into consideration the expected trends in the legal framework (The new Draft Law) which is currently being presented at the Parliament.

Classroom practices in mainstream Greek schools which include children with special educational needs depend on the support of special classes, the supportive special education teacher and the relevant interest of special education adviser and the common school educational adviser. The first step of class inclusion is the referral of the SEN child to the diagnostic centre for a detailed diagnosis and the suitability of the child for inclusion in common classes. The school director is a key person in forming the decision regarding class inclusion. The special education teacher in the special education class is the main supportive person who supports and co-ordinates the supportive services. The Greek Ministry of Education by the new inclusion law 2817/2000 has created new services such as the Diagnostic and Supportive Centres which promote the idea of class inclusion with supportive and co-ordination teachers in co-operation with psychologists, psychiatrists, social workers, speech therapists and nurses. In some cases, such as the inclusion of blind or deaf children, a second supportive teacher coexists in the inclusion class.

The main problems in the Greek educational system concern the supportive services and the retraining of teachers on the basic subjects of special education and especially the ability of the inclusion class teacher to apply individual educational programmes. There have been some good efforts to train Greek teachers with one year's in service training from the Greek universities. There are also enough special education teachers in Athens and other Greek cities but the problem is in the rural areas where neither supportive services exist nor special education teachers.

School practice in inclusion classes consists of an effort to inform the school teachers, the pupils and their parents that all children have the same civil rights and therefore they must have the same opportunities to live with their normal classmates. The class organization changes on behalf of SEN children. Group work is the main inclusion practice. Individualization as an educational practice is the key point in classroom classes. The relevant problem is the lack of time for the teacher to plan the IEP and carry it out with the necessary evaluation. Another problem is the lack of educational material and the adaptation of the national curriculum. The introduction of educational technology is a matter of discussion since the teachers need relevant training and a suitable software. At this point the European

experience would be of great assistance.

School organization is the key point of class inclusion. The whole school approach depends on the ability of the school to adjust to the needs of SEN children. Greek schools now prepare access for people with mobility problems, and all new Greek schools have ramps and elevators. The problem is with the old school buildings which do not have proper access for children with mobility problems. The problem with the organization of school inclusion is the lack of space for the function of the resource room with supportive educational material. Some problems emerge for teachers and parents in the inclusion of children with behaviour and intellectual problems. Without support these cases are the most difficult to anticipate.

The teacher's attitudes to class inclusion in Greece are for the most part positive. The fact that the majority of SEN children are included in the Greek educational system confirms the issue. You may find the following categories in primary and secondary schools: special learning difficulties, behaviour problems, mild mental retardation, health problems, blind and deaf, autistic, Asperger's syndrome, language and speech problems, constituting 90% of ESN children. Special schools have another 5% and the rest remain without support due to multiple disabilities. These children find support in special clinic centres. The positive inclusion attitudes of Greek teachers is an encouraging point in promoting the quality of special education in Greece. European support and the exchange of experience are fundamental sources for the reorganization of special education in Greece.

Generally, children with behaviour problems are the most difficult to cope with. Teachers in ordinary schools find these cases extremely difficult to anticipate effectively due to lack of supportive services and the proper behaviour modification techniques. The two methods they apply: pressing the children or ignoring the disturbing behaviour are ineffective. They need to know the behaviour modification techniques and use them properly according to the children's needs.

Mentally retarded children are another category that creates problems in the inclusion classes. Mild retardation without behaviour problems is the most acceptable category, but children with serious mental deficiency are kept out of inclusion classes. They are transferred to special schools for mentally handicapped children where they receive special education and proper support. Greek teachers regard the education of mentally handicapped children as being outside their responsibility as they regard teaching lessons concerning social and life skills teaching as the work of special education teachers.

Children with specific learning difficulties (dyslexia) are another category which is difficult to incorporate into inclusion classes because of the inability of teachers to apply proper methods of teaching and lack of suitable educational material.

Autistic children are excluded from inclusion classes because of the lack of supportive people to help teachers accommodate these children in the classroom setting.

Children with multiple disabilities are also excluded from inclusion classes. The main reason is, again, a lack of supportive people, as well as of equipment, teaching materials and the reaction of teachers and parents to this kind of inclusion.

The Greek document analysis is presented in Appendix G.

5.8 Iceland

Gu_ni Olgeirsson, Working Partner Iceland

The law concerning compulsory education stipulates ten years of compulsory schooling for children and adolescents between the ages of 6 and 16. The term special education, however, is not found in the law. The ideology is that the compulsory school shall be inclusive, catering for special educational needs as well as other educational needs of its pupils. A regulation for special education is based on the law.

The National Curriculum from 1999, based on Icelandic laws, regulations and school policy, has the status of a regulation and applies to disabled pupils and non-disabled pupils alike. There is thus no special national curriculum for the disabled. The National Curriculum Guide from 1999 outlines aims, objectives and curriculum content but leaves curriculum details, structure and teaching methods to the schools and individual teachers to decide. Special education is not dealt with separately in the new guidelines; the main aim is inclusive education but the rights of pupils with disabilities to an appropriate education, and compulsory schools are entitled to educate all children.

As a general rule disabled pupils have a right to education in their local mainstream schools. Many ordinary schools accept pupils with disabilities into their regular classroom, including pupils with severe mental and multiple handicaps. There are, however, some special schools and units catering for one or more SEN pupils and there are also special classes/units within local schools.

Books and articles have been published on various teaching methods and general classroom practice, for example Sigurgeirsson (1999). One book has been published in Icelandic, namely Gu_jónsdóttir *at al.* (1999). In recent years there have also been various projects in Iceland dealing with the challenge of including children with various special needs into mainstream education, for example blind pupils, deaf pupils and pupils with Down's syndrome.

There has also been material relevant to the Icelandic context in educational periodicals and unpublished masters' theses. Published research results could not be found in Iceland relevant to the literature review for the European Agency. Policy papers on that issue could on the other hand be found, for example in the National Curriculum Guide and some legal documents and opinion papers.

In the last two decades there has been a radical change in Icelandic school policy where inclusive education is the aim, preferably that all children should be taught in their neighbourhood school in mainstream settings. It is a challenging task to teach all children under these circumstances and this policy is demanding for compulsory school teachers. Children with disabilities can now say: 'I will be in the same school as my brother and sister.' This change in the school system and organization of schools has been much discussed in Iceland but very little research has been focused on how this policy works and what effects it has on children, both children with special educational needs and other children.

It is possible to find some indicators about the outcome of this new policy in several research papers, essays, opinion papers and periodicals. The general compulsory school is in many ways not prepared for dealing with this new situation. For example sufficient information has not been given to schools by doctors or other specialists about pupils with special educational needs and schools have not had the appropriate facilities or equipment to

fulfil the needs of the pupils. Teachers have been positive towards this new policy and have in general done whatever possible to welcome the pupils in their schools and classrooms. Often teachers do not get enough expert support in regard to the special educational needs concerned. Teachers may find it very difficult to find suitable tasks for the pupils in mainstream settings, unless they receive a great deal of support and extra material. Socially the pupils may not function well with the mainstream children. The pupils have an individual education plan and co-operation with the parents about the curriculum and welfare of the pupils is considerable.

According to a recent OECD case study from the Iceland University of Education (Marníosson and Tryggvadóttir (1993), of pupils with special educational needs in mainstream school in Icelandic schools, some indicators were noted concerning characteristics of successful inclusive schools. The staff were positive and interested and believed in inclusive education. Some enthusiastic teachers were responsible for the inclusion. These pupils in mainstream classes worked according to an individual education plan and the teachers used differentiation and various teaching methods and teaching material to give all children in their classes suitable tasks. Teachers, parents and other pupils were tolerant and communication was generally positive. Some pupils only participated part-time in the mainstream classroom. The schools were experimenting to find ways that everyone in the school community could agree upon – the staff in schools, pupils and parents and school authorities –and in this, they were successful. The schools wanted more pedagogical and organizational support and in-service training for the teachers. Social inclusion was only partially attained and educational inclusion was in fact rather limited.

The home/school partnership is very important, and it is also important that parents are involved in the decision-making process at all stages. The parents have the authority to choose a general mainstream school for their children, also those with severe disabilities. It is important to reach an agreement about the process that leads to a decision and parents should have opportunities to express their opinions and wishes. According to recent Icelandic research by Eyrún Gísladóttir (unpublished, 2000) about parents´ experience, they are disappointed if their children cannot attend compulsory school with their peers as they could in pre-primary school. Some parents on the other hand might choose a special school, especially for the severely disabled. Generally parents feel they are constantly fighting for the rights of their special needs children to receive suitable education and service and that they are not involved in the decision-making process. They point out the need for a holistic information service concerning education, health service and social service and the need for a better co-ordinated service for all support systems.

For children with special educational needs in mainstream schools the teachers organize an individual education plan for each pupil based on his or her ability and needs and general development. Also the emotional status of the children is considered. In that curriculum there are general and specific educational objectives and what educational environment is considered suitable for the pupil to attain the objectives. When the pupils are in mainstream classes the specialist service of the schools tries to support them whenever possible.

Children with behavioural and emotional problems are a demanding group of pupils in schools. In many cases teachers don't get sufficient assistance within the classroom. The pupils can be very disruptive in class, but the schools find themselves unable to deal with this challenging situation in an effective way. Parents of other children might request better educational environment and working conditions for their children. This can lead to the fact

that such children feel they are rejected from school and in a way from society. The schools must therefore find new methods to include these pupils without reducing the quality of education in general.

One of the biggest problems is closely connected to attitudes and the organization of the school work. Teachers often complain of lack of time to meet the educational and emotional needs of their pupils. They complain even more when there are many different needs to be seen to in the same classroom, especially concerning emotionally disturbed children. The pupils who give the most problems in the classroom have psychological or psychiatric problems, those diagnosed as hyperactive and also those with socio-emotional problems and dyslexia. Some of the diagnoses that children take with them to school mark them out as having special needs and many teachers feel that they do not have the competence to teach them as well as they would like.

According to the regulation on special education it is the responsibility of special education teachers to write individual education plans for pupils with disabilities. These education plans are generally reviewed at least annually. Teaching takes place either in small groups or individually with group sizes ranging from two to ten pupils according to individual needs. Computer assisted teaching is common, both for the purpose of teaching specific content but also to train pupils in the use of computers as a working tool. Teaching is also frequently supplemented by video programmes and audio material. A great deal of personal guidance is provided in all the schools and units to enhance pupil confidence and interpersonal skills and co-operation with parents is intensive.

The new school policy addresses the different needs of individuals with flexible schooling and diverse teaching methods. The objective is not to teach all pupils the same thing at the same time, but rather to provide pupils with a solid foundation in the academic fields that they choose, based on their abilities and interests. It is not fair to pupils, who are two to three years behind or ahead of their peers academically, to be forced into inappropriate subjects. Pupils, both strong and weak, have a right to subjects appropriate to their levels of ability.

Teaching methods vary a great deal depending on the type of disability and the schools concerned. The schools use a variety of methods to suit the pupils' needs including direct teaching, project work, excursions and co-operative teaching to name only a few. The tasks in school should be suitable for both boys and girls, pupils in rural and urban areas, pupils with special educational needs and others, regardless of origin, religion and nationality. One of the most challenging tasks for schools is to find ways to fulfil the various needs and interests of pupils and to be suitable for all and to provide a quality education.

5.8.1 Factors influencing educational inclusion

Important factors are as follows:

- general organization of schools;
- the role of the head teacher;
- school curriculum, school policy;
- individual education plan for pupils with special educational needs;
- general atmosphere in the school;
- role of the class teacher;

- pedagogical and organizational support;
- suitable teaching methods;
- in service training for teachers;
- educational material, use of ICT;
- equipment;
- parents' participation and involvement, information to parents;
- co-operation within a school;
- diagnosis and evaluation;
- focus on the needs of pupils, teaching children, not classes;
- meaningful learning.

5.9 Ireland

Peadar McCann, Working Partner Ireland

There have been no books published on the theme of classroom practice in Ireland. Most books that one finds in libraries and bookshops refer to practice in the United Kingdom and the United States. Those published in the UK are most likely to influence classroom practice in relation to special needs education in mainstream schools in Ireland.

The search for material relevant to the Irish context was limited to periodicals and unpublished masters' and doctoral theses. The theses were located in libraries attached to the constituent colleges of the National University (University College Cork; University College Galway; University College Dublin; and University College Maynooth), Trinity College Dublin, St Patrick's College of Education, Dublin; and Mary Immaculate College of Education, Limerick. The latter institutions are primary teacher training colleges. St Patrick's College of Education has a Special Education Department.

The paucity of reference material is explained, to a large extent, by the historical underdevelopment of provision for pupils with special educational needs in mainstream schools. Up to very recently (1998), the vast majority of pupils who were assessed as having special education needs have been accommodated in the segregated special school system or in special classes attached to mainstream.

Comparatively few pupils with identified and assessed special education needs were enrolled in mainstream classes in primary school. These, in the main, tended to be pupils who were clearly identifiable as having special needs, such as pupils with Down's syndrome or those with a physical disability such as cerebral palsy or spina bifida. A factor in the enrolment of these in mainstream schools was the existence of lobby and support groups, such as the Down's Syndrome Association, Cerebral Palsy Ireland (CPI) and the Central Remedial Clinic (CRC) which advocated integration and inclusion and which, in some instances, provided additional teaching support for pupils with special education needs in mainstream primary schools.

The research that is available in published or unpublished form is largely focused on pupils with the above mentioned types of disabilities. More material is available on the functioning of special classes in mainstream schools but this is not relevant to the present study.

Since the introduction of Department of Education and Science Circulars relating to provision of resource teachers and special needs assistants in mainstream primary schools and the passing of the Education Act in 1998, there has been a dramatic increase in the number of resource teachers and special needs assistants in these schools, a development which is coupled with a very significant improvement in the level of available teaching equipment and materials. It is anticipated that the introduction of post-graduate courses at masters' and doctoral in special needs education in Ireland's colleges of education will encourage research on the integration/inclusion of pupils with SEN in mainstream classes in primary schools.

Only three studies of any relevance were found (see Appendix H). These were based on small samples and were generally descriptive and quantitative. The studies were mainly confined to pupils with Down's syndrome and physical disabilities (spina bifida or cerebral palsy) in mainstream classes in individual or clusters of schools in a local area. In all

instances, information was gathered through the completion of questionnaires by teachers and/or parents or through structured interviews.

There was no specific focus on cognitive outcomes, emotional outcomes or social outcomes in any of the studies. For detailed information see the Appendix H.

It is important to bear in mind that all of the research on education provision with special educational needs was carried out prior to the allocation of additional teaching resources, special needs assistants and specialized equipment to mainstream primary classes. Many of the obstacles to integration/inclusion by the lack of resources have been addressed and resolved, to some extent.

However, some of the barriers to effective integration of pupils with special educational needs in mainstream classes in Irish primary schools remain. These are as follows:

- Lack of knowledge among teachers about special needs education. For example, teachers of mainstream classes generally know very little about mild or moderate general learning disabilities, about specific learning disabilities, about autism, Down's syndrome, ADD/ADHD or the various types of physical disability, in other words, about the type of pupils with special educational needs who are most likely to be integrated in mainstream classes. The lack of basic knowledge about these conditions is obviously accompanied by a lack of understanding of the implications of these conditions for teaching and learning. The problem is compounded the lack of meaningful and regular access to professionals who could offer advice on the management of learning and behaviour in respect of special needs pupils in mainstream classes. This specialist advice is available in the special school system but there is little structured contact between mainstream and special schooling.
- The lack of adequate pre-service and in-service training for teachers in special needs education. In recent times, induction and introductory in service courses have been organized for resource teachers working in mainstream primary schools but these need to be supplemented by more extended specialist courses. There is a very definite lack of appropriate school-based in-service training for classroom teachers in special needs education.
- The lack of knowledge among resource teachers and class teachers about the development of IEPs and strategies for the delivery of IEPs.
- Teachers in Irish primary schools are not usually accustomed to working in a multi-disciplinary manner with other professionals such as speech and language therapists, occupational therapists and psychologists.
- There is a relative paucity of support services such as psychology, speech and language therapy and occupational therapy.
- Large classes. There is no provision for reduction in numbers in classes in which pupils with SEN are placed.
- Lack of access to relevant medical, psychological and other reports. Schools do not have an automatic right to view these reports as they are deemed in law to be the property of the persons who commissioned them. For example, it is not uncommon for parents to refuse to give a psychological report on their child to a school and assessment agencies

will not release reports without parental consent.

- Resource teachers. In recent years, there has been a demand for the appointment of resource teachers who will provide a service for children with SEN in mainstream classes in primary schools. During 1999 and 2000, there has been a very dramatic increase in the number of resource teachers. However, there is still a shortfall in some areas, due mainly to schools having difficulties in obtaining psychological reports.
- Even when schools are given funding to employ resource teachers, there can still be a difficulty in recruiting trained personnel because of a national shortage of primary teachers. This is due to an unanticipated increase in the population.
- A significant number of primary schools do not have a policy on the integration/inclusion of pupils with SEN in mainstream classes. In effect, they are badly prepared to accommodate pupils with SEN when faced with the enrolment of such pupils. The point has been made in relation to integration/inclusion that, when a pupil with SEN is to be enrolled in a mainstream school, there should be a period of preparation which will enable teachers to plan effectively for the new situation..
- The role of the principal teacher. S/he is seen as a key figure in the process of integration/inclusion. It is critical that s/he should be supportive and actively involved in the process.
- The lack of special needs assistants has been a problem in the past but this is no longer a serious deficit as there has been a huge increase in the numbers employed in primary schools in the last two years.
- Absence of suitable curriculum guidelines is seen as an obstacle to integration/inclusion.
- A need is seen for an advisory/guidance service for parents of children with SEN, so that they can be more actively involved in the process of inclusion/integration. The need for a formalized system of communication between parents, teachers and other professionals is viewed as critical.
- Additional funding is seen as very important, especially in regard to the needs of individual children with SEN.
- Lack of consultation and of a co-ordinated approach to curriculum content and teaching strategies among class teachers and resource teachers can be a problem in schools.

Finally, the need for positive attitudes to inclusion/integration in school is seen as critical to the process.

The Irish document analysis is presented in Appendix H.

5.10 Luxembourg

Pia Englaro, Working Partner Luxembourg

5.10.1 Introduction

The law of 28 June 1994 changed the organization of schools (pre-primary, primary and post primary education) and indicated that children with motor, sensory, intellectual and emotional difficulties and who are of compulsory school age may be integrated into mainstream schools.

In accordance with this law, the 'Service Ré-Educatif Ambulatoire (SREA)' was created, which, in agreement with the inspector of primary education and the local authorities or the concerned director of post-primary schools, organizes the support for children, who, because of their disabilities, have special needs and require specific pedagogical help during school time.

Two relevant documents have been traced within Luxembourg:

1. Pull, John (1998) L'Intégration psycho-socio-pédagogique en classe scolaire ordinaire de l'élève affecté d'un handicap.
2. Chapellier, Jean-Louis (1999) Evaluation de la pratique d'intégration scolaire au Grand-Duché de Luxembourg : Points de vue, constats, recommandations.

5.10.2 Short description of literature

The research carried out by Pull (1998) presents a comprehensive description, analysis and explanation, with a philosophical touch, of what is being done currently in educational integration at international level, particularly in the countries of the European Union.

The specific case of Luxemburg included in the research work, acts as a mirror, reflecting at national level the diverging views and the great diversity of experiments, projects, trials and models for educational integration being applied in Luxemburg.

The different chapters give a brief analytical view of the space reserved for the disabled child in terms of psycho-educational and social functioning.

The work also covers the scientific working method concerning the non-directive interview and the theories of content analysis.

One chapter is devoted to the interviews carried out with 11 specialists who are professors at universities in Europe and Quebec. This section closes with a discussion of the corresponding reasoning and a comparative analysis of the positions of the specialists selected.

Chapellier (1999) uses the techniques of individual or collective interviews and enquiry through questionnaires, which enable him to collect a large number of facts and information in quite a short time. These techniques offer a good overview of the present situation.

5.10.3 Classroom practices and cognitive, emotional and social outcomes

Research in Luxemburg shows that for most professionals, integration of a disabled child is quite a positive experience. Three-quarters of the questioned professionals think that for the disabled child, integration is a rather good experience. Nearly 70% think the same for the

other pupils in the class.

The aim of integration is the acceptance of each person in his/her own environment, which then allows him/her to act as a full member of society.

Integration must be understood as a means to guarantee the fulfilment of potential of children with special needs. The future aim is integration into society. The right of instruction and education includes the right for common instruction and education for *all* children.

The educational mission of school involves the bringing together and the mutual respect of all children in spite of their social, cultural, physical or intellectual differences. The disabled child can and must learn in the context of normal daily life, which offers him or her the best stimulation. The child learns through other children and thanks to other children.

The two authors analyse the viewpoints and anxiety of *parents* of disabled children. They draw the conclusion, that parents are aware of different problems occurring while integrating their child in mainstream schools. Difficulties often appear because of the voluminous school programme and not always adapted methodology. Evaluation of the disabled child's work remains a problem.

The *teachers* are aware of the rigours of Luxemburg's school system, in matter of quantity and level of school programme because of the three languages. They deplore their lack of information, knowledge and advice concerning disabilities. Sometimes they refuse to integrate a child, because they don't want a second professional in their classroom or because of increasing workload.

The *specialists* regret missing structures for good teamwork: very often time for dialogue between specialist, teacher and family is insufficient.

5.10.4 What works?

Pull concludes that special schools should be integrated as much as possible into mainstream schools. For common difficulties he proposes seeking common solutions. He recommends differentiated educational methods in dialogue and partnership with all partners to devise appropriate types of compromise.

Chapellier makes recommendations concerning:

1. the organization of schools;
2. the Department of Special Education;
3. the SREA;
4. the National Commission (Commission médico-psycho-pédagogique).

Chapellier recommends:

- the creation of one school for *all* children;
- the transformation of the SREA into a resource centre which would allow better dialogue between partners;
- the transformation of the National Commission into a dialogue platform for general school organization;
- the listing of existing structures by the Department of Special Education.

Analysis of the two Luxembourg documents is presented in Appendix I.

5.11 The Netherlands

Sip Jan Pijl, Working Partner the Netherlands, and C.J.F. van Wijk

5.11.1 Introduction

For centuries special needs provision in the Netherlands has largely been provided by special schools. Experiences with integration are rather recent. It is only in the last 5–10 years that particular groups of pupils have been integrated in regular education (see Meijer, 1998). Many teachers in regular schools have little or no experience in integrating pupils with special needs in the classroom. They fear – or actually experience – problems in integrating these pupils and would like to have information on 'tested' ways of making inclusion happen.

The short Dutch integration history implies that research findings on effective inclusion practices, based on research data collected in the Netherlands, is limited. However, some research on the problems teachers experience and on how best to meet the needs of these pupils in the regular classroom has been done and is reviewed here. The purpose of this review is twofold:

1. to investigate the main problems experienced in regular education concerning integration;
2. to describe Dutch research data on effective classroom practices in inclusive settings.

5.11.2 Methodology

The main problems experienced in integrating special needs pupils in regular education concerning either relate to choosing the most appropriate classroom practice or handling a specific group of special needs pupils in a mainstream setting. In practice problems are linked: often those problems experienced in developing effective strategies in regular education and handling groups of special needs pupils coincide. A difficulty in answering the question about the problems experienced by teachers is that appropriate research is scarce and research data are not categorized according to difficulties or 'problems' when searching data files.

To address this question we analysed every article in five relevant Dutch specialist publications on special needs education: *Tijdschrift voor Orthopedagogiek* (1999–2000), *Didactief* (1996–99), *Speciaal onderwijs* (1998, 1999), *Van horen zeggen* (1995–98) and *Jeugd, School en Wereld* (1997–99). By using references found in the articles and literature searches on integration a few other relevant documents could be traced.

To answer the second question, studies were located by searching several databases. These included *Onderwijsdatabank* (containing articles and books on educational research and the development of curricula and tests), SWL (containing books and articles on social science research), and PiCarta (an on-line database for searching multiple library databases simultaneously).

Given the guidelines for this review (see framework), the keywords used for the literature search were: 'primary education', 'inclusion', 'mainstreaming', 'integration', 'special education', 'handicapped', 'special needs', 'teaching methods', 'curriculum', 'emotional and social development', and 'academic achievement'. Effects have been formulated as outcomes on pupil level in terms of academic achievement, emotional development and social

behaviour.

Hundreds of articles and books were found, most of which were opinion based. Few addressed effects in terms of pupil output. About 40 books and articles were screened and a second search was carried out using keywords extracted from the outcomes of these studies. Those used in this second phase were: 'co-operative learning', 'peer tutoring', 'adaptive education', 'bullying', 'grouping', and 'ambulant teaching'. Reference lists from identified studies were also searched for additional sources. After the screening process, 10 studies were considered relevant since they met most of the selection criteria for this review (see framework).

5.11.3 Problems in regular education and challenging special needs

An investigation into the main problems experienced in integrating special needs pupils in regular education and specific groups of such pupils poses the greatest difficulty because of lack of experience with integration in the Netherlands.

A growing group of pupils with special needs are currently attending a regular school with peripatetic support, but most of these are carefully selected by the special school to optimize their chances of succeeding in a regular school. A pupil's impairment should not seriously hinder him/her from receiving instruction; pupils should not lag behind greatly for their age and they should be able to work independently and participate socially and emotionally in the group; and the new school should be able and willing to adapt education (Hoogendoorn, 1998). This is from the start an above average performing and motivated group (Kool and Derriks, 1995, 1996) and as such seems to present relative minor problems in education.

There are, of course, a number of problems with regard to peripatetic teaching, such as lack of time, insufficient opportunities for consultation and restricted possibilities to support pupils with problems. Peripatetic teachers themselves are faced with a lack of clarity regarding their function and tasks. Moreover, peripatetic supervision is often an occasional occurrence, particularly in primary education. This is related to the fact that only a small number of schools have more than one pupil receiving peripatetic supervision in a classroom. Research shows that focusing on the pupil's social and emotional development in peripatetic supervision is an important factor for successful integration (Kool and Derriks, 1995, 1996). Regulations for peripatetic teaching are to be replaced by the so-called 'back-pack' policy in the near future.

Another growing group of pupils with special needs in regular primary education are those with Down's syndrome. Regular schools in the Netherlands do not have to accept such pupils, although it has become evident that regular schools are tending to place younger pupils with Down's syndrome more than older ones. This is most likely due to the fact that the necessary changes to the curriculum for younger pupils are fairly modest compared to those in the higher grades. Teachers point out that integrating pupils with Down's syndrome requires the involvement of all teaching staff, i.e. developing an IEP, selecting appropriate learning materials and arranging co-operation between all the people involved. Next to the extra time needed to carry out these tasks, time should be available for additional training (Graaf, 1998).

It is obvious that pupils with Down's syndrome have a special position in the classroom. In many aspects they are considered part of the class and are involved in similar activities as

other pupils. Yet these pupils receive (and need) special attention in individual settings, devote part of the time to their own activities, have their own way of communicating and are treated differently by their class teacher. Research data suggest that in most cases these differences are accepted. Yet in a number of cases referral from a regular to special school occurs. This mainly happens when after a number of years in regular education a number of integrated pupils are referred back because of social/emotional problems (e.g. difficulty in accepting that other pupils in the classroom have different tasks, or almost autistic behaviour resulting in isolation within the classroom). In some cases, however, targeted interventions have had positive outcomes (Graaf, 1996). Another reason mentioned is a lack of academic progress. Regular school teachers point to rather low levels of performance as the main reason, although parents think that with additional time and attention referral could have been avoided (Scheepstra and Pijl, 1996).

In general integration is seen by teachers as a positive development, although they worry about the impact having pupils with special needs in their classroom might have on their workload and on other pupils. In particular, managing several tailor-made educational programmes, supporting social processes in the group and co-ordinating the task of a larger number of people involved are regarded as problematical (Homans, 1997). Regular schools indicate they are already dealing with increasing numbers of pupils with special needs (ADHD, autistic spectrum, behaviour problems) and need support in meeting the needs of these (Doorn, 2000). Houtveen, Pijl, Pijl *et al.* (1998) show that teachers generally refer pupils to special schools if they think they have a learning problem, perform at a lower level compared to classmates of the same age, have behaviour problems and/or problems regarding social/emotional development. According to the teachers learning and behaviour problems go hand-in-hand in over 50% of referrals. Research by Derriks and Kat (1997) suggests that teachers find pupils with behaviour problems and/or problems regarding social/emotional development much more difficult to handle and such pupils, also given the learning problem, are especially prone to referral. Teachers seem to have a fairly good knowledge about the performance and problems of their pupils but find it difficult to use that knowledge to develop and implement more adaptive education (Peschar and Meijer, 1997).

5.11.4 Effective classroom practices in inclusive settings

Several research projects on the inclusion of pupils with special needs are described in literature. Some of the interventions studied are aimed at individual special needs pupils and their teachers, while others focus on improving the school to create a setting in which they can be educated successfully.

5.11.4.1 *Interventions directed towards individual special needs pupils*

Part of the mainstream provision for special needs pupils is based on pupil-centred support, either individually or in small groups. A study by Oudenhoven and Baarveld (1999) shows that the majority of pupils with special needs receive support from so-called 'ambulant teachers'. These teachers belong to a special school team and visit regular schools to support the regular teacher and to work individually with pupils with special needs. On average these pupils are educated outside the classroom for around 11 hours a month.

Oudenhoven and Petersen (1996) gathered data on special needs provision in regular schools by interviewing teachers and observing classroom practice. They report that next to

the ambulant teachers from the special school, most regular schools also deploy their own remedial teacher and internal support co-ordinator. The latter provides professional guidance and support to the class teacher, while the former has a major role in implementing face-to-face programmes with pupils in and outside the classroom. The quality of this support for the regular teacher is regarded as an important factor in including pupils at risk.

Scheepstra and Pijl (1995) show that the majority of pupils with Down's syndrome in regular education have their own tailor-made programme. Eighty-four per cent of them follow a pullout programme for on average three hours a week. Pupils in lower grades spend more time in their own classroom than those in the higher ones. For about half of the pupils with Down's syndrome the programme is written down in an individual educational programme. To encourage contact between the pupils with Down's syndrome and their classmates, teachers actively involve them. They are given a central place in the classroom, their social skills and those of their classmates are practised, and co-operative learning instructions are used. Most teachers think including pupils with Down's syndrome in mainstream schools is enriching for other pupils, and affects the social development of pupils with Down's syndrome positively. Parents and teachers are generally fairly positive about the contacts of pupils with Down's syndrome and their peers. Observations, however, indicate that when compared to low and average performing non-disabled pupils, those with Down's syndrome have less contact with classmates (Scheepstra, 1998).

Kool and Derriks (1995) discuss the effects of ambulant teaching on pupils who are referred back from a special school to a mainstream school. Of these, between 59 to 77% are average or above average, in reading, spelling, and maths. Regarding social-emotional functioning, there was no decline for at least 81% of the pupils. Overall, 86% of the pupils were considered to have been successfully incorporated. Those that were not were mainly pupils with severe problems.

Research results also mention techniques to help pupils within their own classroom. According to Oudenhoven and Baarveld (1999), practices regularly used in the inclusion of impaired pupils were: working according to a plan, giving positive feedback, individual support, independent working, extra instruction, and the use of concrete materials. The impaired pupils and their peers were treated equally, they followed the same rules. Peers were stimulated to help the impaired pupils, and not to bully them. Teachers' opinions of the behaviour and self-confidence of the pupils, and their interaction with peers was generally positive. Teachers judged less positively about the academic achievement and independence of special needs pupils.

5.11.4.2 *Interventions at teacher level*

Not only do the included special needs pupils receive extra support, but it is obvious that teachers need to be supported too. In regular schools teachers are mainly supported by special education teachers (54%) (Oudenhoven and Baarveld, 1999). School support centres also play a part in the inclusion of pupils with special needs, with the exception of deaf and blind pupils. Teachers of these pupils are supported by specialized institutions for the blind and deaf. Activities directed at teachers consist mainly of giving support and guidance, helping with assessment and contributing to increasing skills and expertise. The majority of school directors in that research (80%) stated that the inclusion of pupils with special needs had a positive effect on teaching other pupils at risk as well, since the growing expertise and involvement of teachers resulted in higher quality education (Oudenhoven and Baarveld,

1999).

In addition to the effects of ambulant teaching at pupil level, effects at teacher level are described by Kool and Derriks (1995). Seventy-two per cent of teachers stated that ambulant teachers' support made them feel more competent and gave them more knowledge about the problems of their pupils with special needs. Although ambulant teachers indicate that they do not regard improvement at school and group level as their responsibility, 25% of the teachers felt that their competence and expertise in meeting the needs of their pupils had increased.

In order to establish a more structural school improvement, a support programme for teachers was implemented in 12 experimental schools (Houtveen, Booy, de Jong and van de Grift, 1997). This focused on the implementation of adaptive education and specialists from school support centres supported the participating schools. The activities consisted of meetings with all participants, meetings at separate participating schools, and classroom consultations. The programme had a positive effect on adaptive education. One year after the project the effects had remained and in some cases had even increased.

5.11.4.3 *The curriculum*

Various improvements to the curriculum can improve the learning environment for pupils with special needs in mainstream classes, including adaptive education, registration of results, working according to a plan, direct instruction, and certain grouping procedures. Results of a study by Oudenhoven and Petersen (1996) show that in most successful schools, testing and registration of results appear to be an effective approach. Working according to a plan is mentioned as an important factor in adaptive education (Houtveen *et al*., 1997; Houtveen, Pijl, Pijl, Reezigt and Vermeulen 1998). Pupils should be monitored through tests, (extra) instruction should be based on test results, and all activities should be registered in a planning document. This should be a cyclic process. Other important factors for adapting teaching to the needs of pupil include: procedures in place for problems in reading education, co-ordination of individual pupil support, mixing different grades and interventions directed towards pupils at risk, gifted pupils and the youngest pupils (Houtveen *et al*., 1998). In this study, however, observations showed no structural adaptive education in working methods and activities. Some elements of adaptive education were observed in teacher–pupil interactions. No relationship was found between adaptive education and pupil behaviour and achievement.

In a school improvement project, described by Houtveen *et al*. (1997), adaptive education was successfully implemented through a support programme. In addition to working according to a plan, efficient use of time, direct instruction and phonetic synthesis were all mentioned as important factors. Results show that adaptive education had a significant effect on reading skills and reading attitude of the fourth-grade pupils. Unfortunately, this learning gain had disappeared one year after the project.

Guldemond (1994) investigated the effect of grouping procedures. Findings indicate that the comparative and normative function of the reference group have a substantive effect on individual achievement. Ability grouping appears to have a strong negative effect on the achievement of low performing pupils. Pupils in heterogeneous groups seem to achieve better since the whole class serves as a reference group, instead of the ability group.

In a quasi-experimental research project by Vosse (1999) a cross-age tutoring programme was introduced for 16 fourth-grade pupils at risk, who were tutored by seventh-grade pupils. Pupils worked together in pairs during thrice-weekly tutoring sessions over a twelve-week

period. Results indicate that those being tutored greatly improved their mathematical achievement. Tutors' performances improved only slightly through the tutoring programme. Whereas in cross-age tutoring pupils are paired with pupils from other grades, in 'co-operative learning' pupils work together in dyads in their own grade.

In a study by Scheepstra (1998) on the inclusion of pupils with Down's syndrome, 20 out of 23 teachers stated that, among other methods, they used co-operative instruction to encourage contact between pupils with Down's syndrome and their classmates.

Wiersema (1991) carried out four field experiments to determine whether co-operative learning leads to better spelling achievement, and whether this improvement can be explained by increased effort and/or by better reasoning strategies. Pupils worked in dyads and were stimulated to consult each other. They had to correct their peers' work and to discuss mistakes together. The pupils finally received an individual assessment from the teacher.

Two aspects of co-operative learning were studied in the first two experiments: the form of feedback and the fact that pupils correct each others' work. Findings indicate that the form of feedback (individual or shared) has no effect: in both experiments, pupils in a co-operative setting achieved better than those working independently. The results of experiments three and four, however, showed no increase in achievement. The author states that an increase in achievement could not even have been caused by better learning strategies, since results showed that pupils learned most new words by heart instead of applying spelling rules. Concerning learning strategies, the author suggests that co-operative learning probably facilitates the development of better strategies when pupils learn complex cognitive concepts, but not when they learn simple cognitive concepts or automate already developed complex schemes. The general conclusion is that in most cases co-operative learning leads to an increased effort which may not, however, always affect academic achievement positively.

5.11.5 Discussion

In the Netherlands most pupils with serious special needs are placed in special schools. Those integrated in regular schools tend not to belong to the most hard-to-handle pupils. In peripatetic teaching a selected group of pupils is being integrated and the integration of young pupils with Down's syndrome is becoming large-scale practice. While recognizing the efforts of a number of schools in integrating other categories of special needs pupils, Dutch experiences with integration are limited. An analysis of the problems teachers experience in meeting the needs of special needs pupils is thus restricted to the above-mentioned groups.

Basically the same holds true for research findings on effective practices in inclusion based on research data collected in the Netherlands. Most research on effective practices focuses on the pupil groups involved in peripatetic teaching and pupils with Downs syndrome. In the review we also included some research on pupils with mild learning difficulties, although these are not really the subject of the classroom practice project.

Keeping these restrictions in mind, the data suggest a number of practices likely to be effective in inclusive settings. Not really in line with overall ideology is the widely used pullout practice for pupils with special needs. Teachers feel that face-to-face instruction individually or in small groups outside the regular classroom is an effective means in meeting the needs of these pupils. Research also suggests working with an individual education programme, assessing regularly pupil progress, creating extra instruction time and making

use of specially developed/adapted learning materials. Finally, results from working and learning using peer support, peer tutoring and co-operative learning appear promising.

The Dutch research documents are presented in Appendix J.

5.12 Norway

Lars A. Myhr, Norway

5.12.1 Introduction

The principal problem for the European Agency in this literature review is *what* works in classroom practice with regard to inclusive training, and *how* it works. On a more in-depth level, what is required is research that demonstrates the positive effect of classroom practice in the form of positive cognitive, emotional or social development, and research that indicates which variables produce this effect.

It is reasonable to state that this problem provides an approach which has not been prevalent in Norwegian educational or special educational research over the past ten years. Much of the research carried out in Norway over this period has been characterized by looking at the classroom practice of the teacher on a broader scale, with focus on more general development of the role of the teacher and on the teacher's co-operation with others. This is based on the assumption that it is difficult to develop general methods which will give positive results for different teachers and different students. The inherent challenge in inclusive classroom practice is a complex and changeable one and does not, therefore, primarily demand research into specific methods.

It has therefore been difficult in this situation to find publications within the restrictions given. It should at the same time be noted that a literature review of this type cannot claim to be exhaustive. However, some publications have been found, and this report also includes two reports which have, in consultation with the project co-ordinator, been included despite the fact that they lie beyond the restrictions given.

5.12.2 Methodology

The first phase of this literature review consisted of an extensive search involving database searches and enquiries via e-mail.

The databases used were Bibsys (shared database for all university and college libraries in Norway), Pubforsk (Bibsys database for research publications) and Norart (the Norwegian National Library database for articles from Norwegian periodicals).

E-mail was sent to all universities, colleges and the national resource centres for special needs education. The enquiries were addressed to two people assumed to have a central role for the literature review. E-mail was also sent to research environments outside the educational centres.

The next phase of the literature review concentrated on people who were considered to have a knowledge of their own or others' research which would be of relevance to the literature review. These enquiries were made by telephone, personal visit or e-mail.

The literature review has taken the form of tracking down relevant publications by means of the above-mentioned methods. The enquiries have been received with interest, and many people have provided new names and the titles of relevant publications. This method has been labour-intensive and time-consuming, while at the same time being very interesting and instructive. The approach of the literature review has aroused the curiosity of many researchers, as well as their need to express their views on political research aspects of topical interest.

The literature has been assessed as it has been recommended/located on the basis of the criteria listed in the circular issued by the project co-ordinator at the European Agency.

We would like to extend our warmest thanks to the very helpful staff at the Library of the University of Oslo for obtaining the relevant publications.

5.12.3 Main problems concerning the inclusion of students with SEN in Norway

Norway has a relatively well-developed support service for accommodating most types of special needs. Legislation has existed for many years in Norway which acknowledges the fact that all students need education adjusted to suit their requirements, while at the same time the legislation reflects the powerful integration principle prevalent in Norway.

With an inclusive principle in the legislation and a relatively well-developed support service, the need for co-ordination of the various participants in the support service is perceived as an important challenge for which to find a solution. An expression of this attitude is the focus on system-oriented work in an ongoing programme to raise skill levels among the educational-psychological service (PPT) and school leaders.

Examples of different services within local society apart from the school include child welfare authorities and the enabling service, and examples of different participants within the educational sector include the school, the PPT and the national resource centres for special needs education. The scale of this co-ordination depends on how complex the needs for assistance are, but a significant number of students in the Norwegian school system receive assistance from a number of authorities other than just their own school. The great challenge lies in obtaining the most relevant support possible for the user in the areas in which the person in question lives their day-to-day life, and one of the most important of these is the classroom. Central issues include what type of skills are required of the teacher in order to meet the needs of the student?

As a consequence of this challenge, there has been a focus in Norway on planning as regards the organization of the special needs education. An individual educational plan for students with special needs will be prepared which, among other things, describes the student's educational provision at school. An enabling plan can be prepared for students who receive assistance from other authorities over a period. Reference is made in this report to a study which demonstrates how an enabling plan can act as a tool for meeting the challenge of co-ordinating all operations in order to provide the best possible service viewed from the user's perspective (Tellevik, Storliløkken, Martinsen and Elmerskog, 1999).

If we restrict this perspective to the classroom, the major challenge to the teacher is to accommodate all the different types of needs students may have. Teachers have always been faced with this challenge, and this is reinforced by greater and greater demands for full organizational integration. It is generally understood that teachers cannot accommodate and master this challenge through the development of formalized methods. The teacher him/herself is the factor which must be given priority in the development of specialist knowledge and the enhancement of skills. The teacher encounters variable challenges and must therefore be in a position to learn from his/her own practice.

This report therefore refers to a study which describes a model relating to how special educational research can contribute towards improved classroom practice by taking as its starting point the problems perceived by practitioners and the inclusion of practitioners in the research process. Through inclusion in such a process, teachers will improve their

prerequisites for perceiving themselves as 'scientist practitioners' (Skogen, 1997).

The question raised in this connection relates to which groups of students cause the most problems for the Norwegian school system. The usual Norwegian response to this question would be that there are no groups of students that cause problems in Norwegian schools, but that there are groups of students which the Norwegian school system has problems including in its educational system.

As regards which of these groups the Norwegian school system has had problems including in its educational system, most attention has been given to the group of students with social and emotional problems. This applies in particular to students displaying seriously disruptive behaviour.

Problems associated with including students displaying seriously disruptive behaviour in ordinary classes have been much discussed in the mass media, and in addition to this, a number of major research projects have been carried out in Norway over the last five years, focusing on students with social and emotional problems.

The fact that students displaying seriously disruptive behaviour receive most attention can be explained by the fact that it is during the education of this group of students that the issue of organizational integration becomes crucial. Seriously disruptive behaviour in the classroom makes it difficult for the teacher to look after the other students in the class.

When the emphasis is placed on challenges relating to pedagogical integration, other types of special needs will also be emphasized. Pedagogical integration is understood as being the provision of education for the student which is satisfactory enough to promote the student's special educational development. In this connection, a lot of attention has been paid to students with reading and writing difficulties. The avoidance of reading and writing difficulties by means of the stimulation of children in nursery school has been a central theme in this field in Norway.

Between 2000 and 2002, the Norwegian Ministry of Education will implement a skills enhancement programme aimed at the educational-psychological service and school leaders. In this programme, the enhancement of skills for working with students with reading and writing difficulties, social and emotional difficulties and complex learning difficulties have been referred to as priority areas. This prioritization can also be viewed as an expression of which groups of students the Norwegian school system itself believes presents the greatest challenges as regards the provision of a well-adjusted education in ordinary classes.

5.12.4 Summary: what works?

It has been pointed out previously that the restrictions of this literature review do not concur with the principal features of Norwegian research over the last ten years. The restrictions set by the European Agency can also be regarded as a description of a field in Norwegian special educational research that is not covered sufficiently. The dimensioning factors which characterize Norwegian research into classroom practice are the perspective of the teacher and the perspective of the system, while at the same time the majority of studies are exploratory or descriptive. Of these, there are few examples of studies that take into account the perspective of the student and which gauge the benefits derived from the education provided.

However, in this literature review we have been in contact with a number of projects which fall within the 'effect research' field as regards students with special needs in ordinary

classes, but which will not be completed within the time available to us. This may be a manifestation of new trends in Norwegian research, and of the fact that in years to come we will have a stronger empirical basis on which to meet the challenge as regards our ambition to adopt an inclusive classroom practice.

The research documents of Norway are presented in Appendix K.

5.13 Portugal

Vítor Morgado, Working Partner Portugal

5.13.1 Introduction

This brief overview was prepared after the European Agency Day 2000 held in Sintra, Portugal, at the end of last May, joining the two networks (Portugal and Spain). Taking into account the conclusions reached about this theme and from the literature review and the information available on projects/practices and recent innovative experiences in the schools, the knowledge of the situation concerning the objectives of the project – effective classroom practices for pupils with SEN and main trends for action towards inclusive education – is summarized in the following sections.

5.13.2 Literature review

Concerning the literature review which was consulted in order to present the major findings, a search was made of information available in the Ministry of Education, reports from schools and projects and with the help of the Higher Education Institution of Psychology and the Institute for Educational Innovation. The Internet was also consulted, using several well-known sites and browsers.

5.13.3 Inclusion of pupils with SEN in Portugal

Access to education in Portugal is guaranteed by ensuring educational support to those pupils who present special educational needs, in order to facilitate integration in mainstream schools at various levels and using different organizational models. These models of integration range from total integration in the mainstream classroom through to partial integration in activities with mainly social characteristics as well as integration in a special class within a mainstream school.

From a historical perspective, the care of pupils with special educational needs has developed, in this way, from a segregated approach into a more integrative approach, with the placement of special teachers in mainstream schools. Nowadays, the Support Education Services are viewed more and more as an educational support and resource service for mainstream schools, proving their effectiveness. As the Salamanca Statement establishes, special institutions are thus being transformed into specific resource centres that offer support to the educational and social community.

The Ministry of Education has the responsibility for educational support for pupils with special educational needs who are in compulsory education, although there are still some special schools under the responsibility of the Solidarity and Social Assistance Ministry (special schools run by private non-profit making organizations, the so-called Social Solidarity Institutions (IPSS)). The Ministry of Education also has some agreements with private (profit- and non-profit-making) special schools. The schools and the support teachers are managed by five Regional Education Directions in Portugal.

If the education of pupils with special educational needs in Portugal was in the past mainly provided in institutional settings, a clear policy of integration of pupils with sensory and physical handicaps in mainstream education started in the mid 1970s. In this period the

Special Education Service was established in the Ministry of Education. The Basic Education Department has created Special Education Teams, as a service of itinerant special teachers to support pupils with different handicaps in mainstream schools. However, it was only after the publication of the General Comprehensive Law for Education 1986 and the Decree of 1991, that legal instruments were established which guarantee the rights of handicapped children to education and access to mainstream schools. The Comprehensive Law prescribed nine years of compulsory education and stated that special education is mainly established by diversified models of integration and in certain severe cases special education can take place in specific institutions. From 1990 onwards, education has been compulsory for pupils with special educational needs, pursuing the inclusive model.

Our definitions of special educational needs/handicaps, until the 1980s, was based on the classification of the handicaps in categories that were based on medical concepts. In the 1980s, the concept of specific educational needs was introduced, classifying handicaps more on an educational basis. Pupils with specific educational needs are described as pupils who demand special resources and/or adaptations in their learning process to access the individualized curricula established for them.

The law that established the principles of special education, the Decree 319 of 1991, stipulates that the pupil must attend his or her home school and establishes the placement of the pupil in the least restrictive environment. This has implied a complete change of paradigms in Portugal. The assessment of special educational needs is now education-based instead of based upon a medical or therapeutic model.

After a period of debate that went on for some years, a law was created in 1997 (Law 105, 1 July, 1997). Through this law, the organization of special needs education changed, defining support teachers in the school as a resource service, working directly with the school board and co-operating with mainstream teachers in diversifying educational approaches and strategies in order to improve pupils' learning. Support teachers 'belong' to schools that have pupils with special education needs and the so-called 'special teaching' is as much a resource of that school as any other. The attached support aims to meet whole school needs and also serve the wider local community.

Three years after the implementation of this law, there is general agreement of the pedagogical, organizational and social success of this measure. In fact, the role of the educational support teacher (collaboration, liaison curriculum/programme development, monitoring and professional development and training) is very important because s/he is mainly responsible for providing direct and effective support to classroom teachers, with the goal of enabling all students to be meaningfully included in learning activities in regular classrooms, assisting in creating individual curricula and setting up contracts for the implementation or measures settled upon. Secondly, s/he has the responsibility for 'exceptional' students who require individualized supports and services to participate in and benefit from regular classroom instruction.

Taking into account the results of the different experiences and projects carried out since 1991, to reinforce the efficacy of those and their practice from 1998 (recent autonomy and management of schools decree, 115-A from 1998) the school can initiate several activities to influence positively the process of learning of pupils with special educational needs, such as special equipment, special assessment conditions and flexibility of the management of the curriculum. The law establishes the arrangement of an Individual Education Plan (IEP), to be elaborated by the Specialized Education Support Services (Psycho-Pedagogical Services

(SPO), Educational Support Teacher).

Changing Portuguese schools has also led to the changing of special education practice: law, advocacy and innovative attitudes and culture, and therefore to inclusive education as a social policy where access to equality in education, as shown by the conclusions of the experiences described above, is guaranteed by the empowerment and participation of all the actors in the educational process. One of the single but most significant changes has been, as the literature and good practice recommends among other aspects, the redefinition of the school-based special education teacher – the educational support teacher. In this process of innovation toward the inclusive school, other aspects are felt as important by recent investigations: the collaborative consultant model; the significant role of the school administration; the implementation of multi-level instructional approaches (strategies for classroom teachers) and the development of student to student relationships through the curriculum.

Concerning the curriculum and teaching arrangements, pupils with special educational needs should follow the mainstream school curriculum as much as possible in order to prepare their project of life (training, leisure, occupation, work, following studies, and other requisites of citizenship). If the Support Team concludes that some aspects are not possible to organize, there are several options. Depending on specific individual needs, a specific educational plan is developed, where adaptations can be made, varying from simple changes of aims and/or contents to an alternative individual curriculum, leading to a diploma of specific competencies in those fields.

Individuals with SEN are also provided with the support of the educational psychological service as well as all categories of users (inter-professional co-operation in local resource networks), promoting co-ordination of inter-institutional work whenever individuals are entitled to receive support from more than one body or institution.

In this process of reorganization of special education, the aim is to provide meaningful and well-adapted education and training to all children, young people and adults with special needs. The overall principle is that aids to the individual should be available in his/her local community. The special schools are being more and more replaced by resource centres that assist municipalities and schools in the education of children, young people and adults with special needs.

Great emphasis is placed on suitable adapted education, on the grounds that education is for everyone and that all children have the right to receive an education in accordance with their individual abilities and aptitudes.

The objective is to make sure that all children with physical or mental disabilities or with learning difficulties, are as far as possible incorporated into the ordinary school system. Pupils with special needs receive special teaching in the classroom and sometimes (only when all other less restrictive measures don't work out) in special schools, some of which are run by parents associations, with the aim that they remain as far as possible in their local environment.

In Portugal there are now 192 Support Education Co-ordination Teams, involving 443 professionals, whose functions are the co-ordination of different services in the area (6,500 support teachers placed in public schools and 75.000 pupils with special educational needs from early intervention to those who attend at the age of 18), contributing to the detection of special educational needs and the organization of support to improve the diversification of pedagogical practices.

At the moment some projects are developed by co-ordination teams to establish co-operation between local services concerning health, social services, work and education (special schools), for example in the field of early intervention, or transition to active life.

So if traditionally support was organized via Special Teaching Teams – specialist teachers going into mainstream schools in order to support pupils and/or teachers, and sometimes pupils with special educational needs placed in special classes for support – nowadays this approach is not seen to be the most adequate to meet pupils' and schools' needs.

In spite of this, for pupils with more severe special educational needs, the tendency as good practice shows is to establish partnerships between the special institutions (CERCI) and the co-ordination teams of educational supports. Often there may also be the involvement and contribution of other services – such as the Social Assistance Ministry, employment services as well as the municipality – to establish support projects to allow the pupils to participate in social and school activities within their own home area.

In recent years special schools have adopted a clear attitude to supporting the social and educational integration process of pupils with special educational needs. The special schools have developed an increasing number of activities to support integration such as projects of co-operation with mainstream schools, sharing special technical resources and developing complementary activities.

The opinion of parents generally expresses a positive attitude towards the integration of their children in mainstream schools. However, the majority of parents seem to remain passive, because special schools offer an attractive set of activities, like transport and activities with a social character (leisure time activities) so the pupils can spend more time at school than in mainstream schools.

Agreements between the Ministry of Education, Co-operatives (CERCI) and parents' associations have established receive several means of financial support from the State, namely funding for teachers and some technicians and several fees (food, transport etc.). Regarding the private profit-making institutions (Colégios), the Ministry of Education pays a certain amount of money to support each pupil. The Ministry of Solidarity and Social Assistance has, on the other hand, the responsibility of the private non-profit-making Social Solidarity Institutions (IPSS) and parents' associations (APPACDM) for whom the Ministry of Education contributes also with payment of teachers and some other kinds of subsidies. Close co-operation is maintained between ministries and the non-profit making associations and co-operatives (CERCI) and private profit-making institutions (Colégios).

Although there is a clear integration policy in Portugal, sometimes special classes emerge within the system which are especially attended (full-time or part-time) by deaf and multi-handicapped pupils.

The Ministry of Work and Solidarity has created Rehabilitation Centres, both those of their own (two) or sponsored (almost 40) all over the country, which provide special training. Supported employment is also organized by some institutions for adults that can not attend special training.

Recently, activities have been started within the school curricula in order to prepare for adult life. These are being organized for the past few years according to recommendations made by the Ministry of Education with the collaboration of other governmental services and representatives of Parents and ONG for this purpose in 1995.

Another aspect that justifies these recent good results is the effort in training of

professionals of education, being organized by a national programme for in-service training of teachers with the support of the European Commission (FOCO), through which local actions for mainstream and support teachers are being implemented, as well as for directors of establishments, inspectors and other experts and educational key persons. Training focuses on developing and understanding the philosophy of an inclusive programme and practical aspects of the educational project.

Several other institutions have been allowed to organize in-service training, such as schools for higher education and universities and several other teacher-training institutes. In 1996, the Ministry of Education organized in-service training of teachers in very specific areas, such as early intervention, multiple handicaps, cognitive problems, communication problems, sign language, low vision, orientation and mobility, braille code, transition to active life and educational orientation/guidance.

As society is more and more prepared to accept the integration of pupils with special educational needs in mainstream schools, barriers to integration and their harmful effects are being reduced. In fact, there is now a widespread acceptance of the inclusive approach in Portugal, but there are still some obstacles for achieving full integration of pupils with special educational needs in mainstream schools in Portugal.

5.14 Sweden

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5.14.1 Background

Historically in Sweden pupils with SEN have been taught in special classes or as groups of individuals (Bladini, 1990). At the beginning of the twentieth century there was a demand for diagnosis, which could separate pupils with SEN from 'normal' pupils. IQ-tests were introduced, which meant that a lot of children with different special needs could be identified. During the 1940s and '50s special classes grew. Up until 1962 a child's difficulty in the National Curriculum was seen as absolute, i.e. the pupil owned the difficulty and was often taught in a special group or class (Ahlström, Emanuelsson and Wallin, 1986).

Requirements to support pupils with SEN in the classroom were introduced during the 1960s. At the end of the 1960s there was a law, 1968,[5] requiring *all* children, no matter what kind of intellectual disability they had, or how severe it was, to receive at least nine years of education.

In the National Curriculum 1980 (Lgr 80) there was a radical change. In an investigation made in 1974 (SOU, 1997, p. 53) attention was directed to the possibilities and obligations of schools to compensate for pupils' difficulties by changing their ways of working. One diagnosis of pupils' difficulties was not regarded as sufficient to understand pupils' needs. In the National Curriculum 1980, the child's difficulties were seen as relative (Ahlström, Emanuelsson and Wallin, 1986).

During the 1980s schools generally failed to support pupils with SEN within the classroom. Instead extra support to children with SEN was given as before, individually or in groups, one or two lessons a week (Bladini, 1990).

Today the law regarding comprehensive schools says that special support shall be given to pupils in need of special pedagogical help. Such support shall first be given within the class or group to which the pupil belongs. But there is a conditional paragraph stating that, if there is a special reason, such support may be given in a special educational group, although in the latest National Curriculum (Lpo 94) the name special education or special educational approaches have disappeared. Instead the guidelines of Lpo 94 states that everybody who works in the school should be able to help pupils in need of *special support*. This latest National Curriculum, Lpo 94, is common to all compulsory schools and for programmes for pupils with severe intellectual disabilities. However, special education in small groups outside the ordinary classroom to a large extent still exists, not only to represent support but also to indicate a form of organization (Skolverket, 1999; Haug, 1998). When working in these smaller groups the pupils often practise what they are not so good at (Skolverket, 1999). You can say that the inclusive classes has not yet been fully realized in education in Sweden (Emanuelsson, 1992, 1995). Pehrsson (1995) states that special education is used whenever classroom education is insufficient.

[5] In Swedish the law is called 'Omsorgslagen', which can be translated as a law caring for people, young and old, with disabilities of all kind.

5.14.2 The view on special support in the National Curriculum

The National Curriculum (Lpo 94, 1998) prescribes an equivalent education for all, independent of gender, class and ethnicity. Education should be adapted to each pupil's circumstances and needs. The school has a special responsibility for pupils who for whatever reason have difficulties in reaching the goals. The school should strive and ensure to help all pupils in need of special support (Lpo 94, 1998, p. 6). Based on the pupil's background, earlier experiences, language and knowledge, it should promote the pupil's further learning and acquisition of knowledge (p. 7).

The head teacher has the overall responsibility for making sure that the activity of the school as a whole is focused on attaining the national goals. S/he also has the responsibility to ensure that 'pupils have access to guidance, teaching material of good quality as well as other assistance' (p. 23). Special concern is given to pupils in need of special support: 'Remedial measures are adjusted to assessments made by teachers of the pupil's development' (p. 24).

Pupils' rights to special education are prescribed in Government decrees as well. If the pupil is presumed not to reach the goals, the pupil has a right to special education. Special education is preferably given in the pupil's ordinary class or group, but if there are special circumstances the support might be given in a special group.

The Government decrees also prescribe the head teachers' task in ensuring that an individual education plan is made for pupils in need of special support. The plan should be made in co-operation between teacher, pupil and its parents. The plan should make clear what will be done, how it will be done and who is responsible for the work and activities. Also, evaluations should be made continuously.

5.14.3 Result of literature review

The research within the field of special education often focuses on analysing handicaps and different forms of deviation (Haug, 1998; Helldin, 1998). In the field three research paradigms dominate: the psycho-medical focusing on the individual; the organizational focusing on institutions; and the sociological focusing on society (Skidmore, 1996). Sometimes the research has also comprised investigations or evaluations and more seldom research on content and ways of working (Ahlberg, 1999, Haug 1998). Very few Swedish classroom practices focusing pupils in need of special support are described in literature. Only one report (Ahlberg, 1998), one article (Hemmingsson, Borell and Gustavsson, 1999) and one essay (Tinglev, 2000) have been found.

The three documents concerning classroom practice are discussed here. First, the factors essential within the context for helping children with SEN are described. Secondly, the focus is on different outcomes: social, cognitive and emotional. Finally, the main problems within the context of inclusive education are discussed and some remarks are made concerning the groups of pupils with SEN that cause the most problems within the mainstream settings.

5.14.4 Which factors within the context of the curriculum are essential for helping children with SEN in mainstream classrooms?

Ahlberg (1998) thinks that teachers must be involved in a reflecting process and closely observe his or her own teaching in a widened perspective which includes the surrounding society and the organization of the school as well as in the class. If mainstreaming is going to

work special education must be integrated in ordinary education. This must be done not only by developing special approaches per se but in the general development of all schools. There is a threat, though, in the polarity between individuality and collectivism.

Another important factor within the context of the curriculum that is essential for helping children with SEN in mainstream classrooms in Ahlberg's text (1999) is co-operation. To be able to co-operate and later reflect on the work in the classroom these two teachers regularly have counselling sessions about what is happening in the classroom. The special teacher is guiding the teacher during these counselling sessions. Context in these sessions are the teaching in the classroom and the teacher's attitudes and behaviour. These counselling sessions make it possible for the teacher to get an outside view of her work, which encourages her to change methods, content and groups more suitable for the whole group but also for the children with SEN. The counselling sessions also help the teachers to reflect upon and change their attitudes, although it is not that easy to change attitudes and teaching.

5.14.4.1 *What is considered about the outcomes (social, cognitive and emotional) in Ahlberg's research?*

The teachers in Ahlberg's research find that they have developed their view of their profession during these counselling sessions. The counselling sessions have had an impact on the teachers' thinking and acting:

- 'a more joined view on the pupils' social training and the commission to support the pupils' learning;
- a deepened understanding about limits and possibilities offered by the social practice;
- an increased self confidence in co-operation with parents;
- a closer co-operation with the other actors in the classroom' (p. 177, translated).

Even if organization and the social practice limit the teachers intentions, the teacher can learn from episodes in social practice with a pupil in SEN, by describing it and talking about how to find new ways of teaching in the counselling session. It is especially important to look at and discuss the perspective of the pupil in need of special support.

5.14.4.2 *Essential factors in Hemmingsson, Borell and Gustavsson*

In the study of Hemmingsson and others, teaching styles were found important for the participation of pupils with physical disabilities. By characterizing pupil's opportunities to participate actively in the classroom, they identified four teaching styles. The four styles are:

1. the conductor style,
2. the group work style,
3. the dialogue style and
4. the individual task style.

Table 5.1 The identified teaching styles and opportunities to participate actively for students with physical disabilities

	Conductor style	*Group work style*	*Dialogue style*	*Individual task style*
Who decides the pace?	The teacher	The group	The teacher	The student
Opportunities to actively participate?	Limited	Depends on the group	Mostly good	Good

Source: Hemmingsson, Borell and Gustavsson, 1999, p. 33

The *conductor style* was found to be the style that caused most problems for pupils with physical disabilities. These teachers changed activities and learning tools too rapidly for pupils with physical disabilities. Moreover the rhythm was fast and unforeseen which meant less possibilities for communication between the disabled pupil and his or her assistant. The pupil became dependent on the assistant to be able to keep up with the demanding pace. In this teacher style there was no room for a reduced work pace.

In *group work style* the disabled pupil's performance depends on the relationship between the pupils in the group. Activities could be divided according to the pupil's ability if the group was co-operative. But how long the disabled pupil had to carry out his or her task depended on how fast the peers accomplished their assignments. The limits in this style were constructed in the interaction between the pupils.

In the *dialogue style* the focus of the teacher was the whole class. The time used to narrate, question or work was decided by the teacher. Therefore the pupil studied did not suffer from great time problems, since time on task performance could always be adjusted to each pupil. Disabled pupils seemed comfortable and also seemed to think that they had enough time.

In *individual style* the pupils had one or more individual tasks to carry out during at least 20 minutes, which gave all pupils the best opportunities to carry out daily activities, since the flexibility of task performance was good.

Individual style was used in all observed classes, the four regular classes and one special, conductor style was used in three classes; dialogue style was used in one class and in the special education class and group work style in one class.

5.14.4.3 *What is considered about the outcomes (social, cognitive, and emotional) in Hemmingsson* et al.*'s research?*

One of the findings is that if the teacher tended to look at the pupils in the class as a homogeneous group, the handicap for the pupils with disabilities increased.

One of the most interesting findings is that the situation for the disabled students can at its extreme be described as a choice between 'time for doing' or 'time for knowing'. The teacher in the study seemed to be forced to choose between these two choices. If the teacher emphasized knowing, as in one case described, and thus reduced the pupil's opportunities it could only be reached at the price of the pupil's own practice of common school tasks.

There is finally a discussion of learning, which demands both doing and knowing by interaction. It means that the teachers with physically disabled pupils must individualize to give these pupils opportunities to get time for both. And they must be aware of the type of teaching style they use and how it influences learning opportunities for these pupils to be able to find the best compromise.

5.14.4.4 *Essential factors in Tinglev's study?*

In Tinglev's study (2000) *content and support* within Swedish lessons are central. It was shown that the content was very seldom arranged in other ways for pupils in reading and writing difficulties and there were often many different tasks in one lesson. The child that needs special support is often offered the same content as the other pupils. The *support* in the class is characterized by:

- piloting;
- casting an extra eye
- telling the pupil if the answer is right or wrong;
- compensating deficits;
- controlling.

5.14.4.5 *What is considered about the outcomes (social, cognitive, and emotional) in Tinglev's research?*

To change special education from segregated to inclusive, all personnel at a school must be involved in analysing the existing social practice, for example involve themselves in action research, as Ainscow (1998) writes, the teachers must see 'themselves as "reflective practitioners", skilled in learning from experience and, as a result, more responsive to the feedback offered by members of their classes' (p. 13).

Resources are often seen in terms of money and time. However, resources in the classrooms are probably more a question of reflecting on the type of content on which teachers focus. What do they want the pupil to learn? Why? And in what way and how can they support each child in the best way?

5.14.5 The main problems relating to including pupils with SEN

From these three documents, and based on much research on special education the main problems could be described as follows:[6]

- Schools know very little about how to work with diversity without dividing the class in levels.
- There is no, or at least very little, documentation on good inclusive social practice.
- Old structures still dominate, i.e. class teachers rely on special education to 'fix' education for pupils with SEN.
- Teachers hardly have any education or knowledge on how to work inclusively and for diversity.
- Different theories on learning have appeared about how pupils learn and develop, but older theories still decide the organization and structure of subjects and plans, and sometimes also the attitudes of teachers.

[6] Literature used here is: Haug, Pedagogisk dilemma: Specialundervisningen, 1998; Skolverket, 11999, Nationella kvalitetsgranskningar, 1998. Helldin, 1998; Pehrsson, 1995, 1998.

- The National Curriculum and school law are ambiguous about special education. Sometimes they give expression to a view where a pupil's problem is associated with characteristics within the pupil but sometimes within the context.
- Schools have been and still are in a state of reorganization. Financial resources have been cut down during the 1990s.
- Many schools need a change in ways of working. There are still many schools using too passive methods or just practising isolated skills instead of using progressive learning in a context.
- The communicative elements in classes and schools are not used frequently. The collective conversation, the reflection and discussion must be given more space. To discuss and reflect upon the goals of the school and on education as a whole are seen as strategic.
- The special support is used insufficiently.
- Assistants as well as teachers need guidance on how to work with disabilities.
- There is little connection between ordinary education and special education.
- Schools don't use the special teacher as a counseller. More often he/she is working traditionally, i.e. individually or in smaller groups with children with SEN.
- Schools don't follow up and evaluate the special actions taken.
- Teachers' attitudes towards knowledge, methods, special education and pupils with SEN need to change.
- Teachers and schools have too little knowledge about group processes and interactions.
- Teachers work too much alone. Instead teachers must help each other to develop their communication and be more reflective on their own teaching.
- Teachers do not regularly discuss the overall aim and use of the National Curriculum, diagnosis and tests.
- There is little or no development of theories on special education in co-operation with research departments and schools.

5.14.6 Which groups cause most problems?

In Sweden there is no research on which groups of pupils with SEN cause most problems within the mainstream classes. It is generally felt that such a question is too much focused on the owner(s) of the problem. Today more often context, communication and interaction are seen as essential for causing at least as many problems for children with SEN. The situation for a pupil with SEN when situated in a mainstream class is new both for the pupil, the ordinary class teacher and for the special teacher. In one way or the other the situation is problematic.

But in looking at which courses are attractive to attend in special education, teachers often ask for knowledge about the 'new' disabilities, e.g. dyslexia, DAMP/ADHD, autism, Asperger's syndrome etc. It is unknown if it is because these groups cause more problems or because the teachers don't know so much about these disabilities.

On the other hand teachers often refer to difficulties in handling bad behaviour and unmotivated pupils. But research is not available here.

The Swedish research documents are presented in Appendix L.

5.15 Switzerland

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5.15.1 Introduction

In Switzerland the setting of integrative teaching refers as a rule to pupils who are slow learners or learning disabled, but also to pupils with sensory deficits, language disorders or physical handicaps. Pupils with mental retardation generally attend specialized schools. Few research projects exist concerning pupils with sensory deficits, language disorders or physical handicaps with regard to the topic of this study. Therefore most of the research being discussed in this section pertains to the integration of pupils who are slow learners and pupils with learning disabilities. These pupils are generally helped with support lessons by a special education teacher, who teaches them outside the regular classroom. According to a survey by the Swiss Office for Co-ordination of Research Projects in Education (SKBF 93:091) almost all of the Swiss cantons offer at least some form of integrating support by special education teachers. Most of the support lessons are geared toward slow learners or learners with deficits and only rarely is there any support available for the gifted.

5.15.2 Methodology

Taking into consideration the criteria and formulation of questions for the European Agency Project 'classroom practices', we are using for this survey the two Swiss databanks: the Swiss Office for Co-ordination of Research Projects in Education (SKBF) and the Swiss Information and Data-Archive Services for Social Research (SIDOS). Some time ago the Swiss Institute of Special Education made a survey of all the research in special education over the last 20 years (188 research projects in special education, see Rosenberg, 2000), which can now serve as a base for this study. For this particular report 15 of the above mentioned projects are being considered, all of which have been completed after 1990 and whose summaries show certain results. Research projects which are only described in their planning phase understandably cannot be considered to answer questions within this particular report. Another limiting factor is that not all persons or institutions carrying out research have reported this to the above databanks. It is therefore unlikely that all research projects pertaining to our topic in the period between 1990 and 2000 can be taken into consideration.

Details about the different research projects provided by the databanks (roughly one page per project) generally contain the following:

- director and members of the project;
- name of institution and financing;
- brief description of the research project;
- descriptors;
- publications;
- methods of research;

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- instruments of research;
- geographical area of the project.

In addition to these secondary analyses of the above mentioned research projects, the summarizing research, literature analyses and evaluation studies of Bless (1995a, 1995b), Rüesch (1997, 1998, 1999) and Moser/Rhyn (2000) are being taken into consideration for the present report.

5.15.3 Classroom practices and cognitive outcomes

As of now there are only a few investigations in Switzerland as to the relationships between concrete didactic settings of integrative teaching and cognitive performance of the learners. On the other hand the effectiveness of organizational measures like repetitions and integrative ways of teaching have been widely studied. Both are measures which allow the child to remain in the regular classroom and to be taught there. In connection with questions arising from intercultural education the effect of a heterogeneous make-up of classes on school performance has been examined.

5.15.3.1 *Class repetition*

The statistical analysis of the number of repetitions at elementary schools in Geneva (1986–93) has shown that despite an increase in special resources in order to diminish school failure (e.g. smaller classes, addition of support lessons) the number of repetitions as well as the difference in social standing have not diminished but increased. The researchers concluded that in these cases complex influences were at work which needed to be analysed in more detail (SIDOS 1214).

A study from Neuenburg (1995–96) showed after statistical analysis that in elementary school boys repeated classes almost twice as often as girls. In addition boys were being sent to transition classes (class-type with lower requirements) more frequently than girls who in turn attended the gymnasium more often. Also, children speaking a foreign language were at a disadvantage (SIDOS 5020).

A study in the canton Waadt about the school situation of Portuguese pupils (1996–98) produced similar results: repetition as a support measure does not lead to success in school. New types of support measures need to be evaluated, e.g. differentiation within the classroom (working with a particular group of learners within the class) and further training for teachers (differentiation in educational measures). Interestingly enough, repetition as a support measure is used more frequently in the French-speaking part of Switzerland than in the German-speaking part (SIDOS 6700).

5.15.3.2 *Supportive measures – integrated classrooms*

In general, studies since 1980 show clearly the positive effect of integration on the learning development of children with various handicaps. According to current research results, the integration of children with handicaps into regular classrooms does not seem to have any kind of negative effects on the performance of their classmates. In regard to positive effects of integrative teaching measures, however, clear answers are lacking, especially inasmuch as different results are attained for different handicapping conditions (Bless, 1995).

In a long-term study in Freiburg answers were sought in regard to differences between

integrating and separating types of schooling. With the help of qualitative interviews researchers were looking for conditions which might contribute to the co-operation between teachers in order to further the success of integrative teaching. The researchers found that it is important for the regular education teacher as well as the special education teacher to have a common vision of an integrating model for schools and society. They need to be equal partners (which should also be expressed in the level of their salary) and their understanding of their role model and their responsibilities based on the above-mentioned 'vision' has to be reflected in their training, the requirements and duties of all partners (SKBF: 92:060).

Within the framework of a longitudinal study, involving an experimental and a control group, at the University of Freiburg (1995) about the effect of integrating and separating forms of schooling on slow learners, the following hypothesis was formulated. The progress of students who are slow learners or are learning disabled and who are attending regular classrooms with special education support is better compared to students in small (special) classes under the following conditions: if the special education teachers regularly have the possibility for professional exchange with other specialists who have a similar job assignment; if the regular education teacher is successful in implementing a positive climate in the classroom; if the class is composed heterogeneously in respect to intellectual potential of the pupils; if the special educators working in the classroom have completed their full special education training (SKBF 95:053).

In Zürich (1985–1990) the experimental programmes for integrative teaching (with support lessons by special education teachers outside the regular classroom) were scientifically followed in longitudinal and cross-sectional studies as well as with in-depth interviews, standardized tests etc. The evaluation showed that cognitive development of pupils with learning difficulties could be achieved under the condition that interaction and co-operation between all people concerned with education (pupils, teachers, special education and psychological personnel) were functioning well (SKBF 90:073).

Despite the positive effects of support measures, which make integrated schooling possible, new questions arise, as a study regarding the development of integrated schooling in Switzerland (1993) shows. The support measures, which as a rule are implemented outside the classroom and which therefore reduce the number of lessons for the child within the regular classroom, tend to tie the problems to the individual child. This help for the child with learning difficulties therefore suppresses the awareness of the need to offer a general school programme with differentiated and individualized learning environments (SKBF 93:091).

5.15.3.3 *Composition of students in the classroom and quality of teaching*

Rüesch (1997, 1998) has studied the effects of the social make-up of German Swiss elementary classrooms on reading performance of children within the framework of the 'Reading Literacy Study' and has reached the following conclusion: in regard to the socio-economic composition, it was shown that with an increasing number of pupils from higher social groups in a particular classroom, the individual child reaches higher performance, independent of his own social background. It was further shown that in classrooms with a heterogeneous socio-economic make-up, children from lower social levels achieved better performance, while children from higher social levels achieved lower performance. The number of foreign-language children within a classroom, however, had no specific effect on the performance of the elementary pupils in this sample, as long as the other above-mentioned features were being considered (socio-economic mix, class size). The make-up of

a class can be considered a potential risk factor in regard to the quality of learning processes. Many of the mediating factors within the classroom context (subjectively benefiting from learning, self-concept, processes of social comparison, quality of interaction within the class setting) can be subject to educational intervention.

An evaluation of learning success in 80 sixth grades in Zürich (Moser/Rhyn 2000) has shown that the social origin and the (foreign) language origin are closely related and influence the learning outcomes. Classes with a high percentage of foreign language pupils are automatically classes with pupils of generally lower socio-economic background. Analysis of the effect of both of these features, average socio-economic background and percentage of foreign-language children, is no longer reliably possible. All the same, the results tend to show that the percentage of foreign language children turns out to be the decisive factor for school performance. The effects can be clearly shown when the percentage (depending on the definition of 'foreign-language speakers') reaches more than 45–50% – the so called 'topple effect'. Foreign-language pupils who have lived in Switzerland more than three years show only minor delays in performance. The significance of the socio-economic background is more important than the language background in regard to learning success in mathematics and German. In addition, Moser and Rhyn point out that for low performing students the composition of classes which are homogeneous has a negative effect.

Moser and Rhyn (2000) have also collected empirical data about the quality of teaching through the assessment of students and have evaluated this data according to particular classrooms. The following criteria regarding 'quality of teaching' were assessed: explanation of assignments, goal-oriented learning, conveying of information, working climate, discipline, teacher attitude in regard to support of learners, individualized teaching, understandability of lessons etc. No direct correlation between level of performance and quality of teaching could be found. However, the quality of teaching has a positive effect on learning readiness and therefore indirectly on performance.

5.15.3.4 *Didactic measures*

A survey of fourth-grade as well as seventh- and eighth-grade teachers in the canton Waadt showed that concerning the integration of foreign-language children into the regular classes about half the teachers respond to the special needs of foreign language pupils as much with their ways of teaching as with the use of selected textbooks and other teaching aids. The majority of teachers, however, consider themselves not adequately prepared and wish for additional training (SKBF 96:005).

The above-mentioned experimental programmes with integrative teaching models in Zürich (SKBF 90:073) demonstrated that positive development in school performance of pupils with learning difficulties can be reached in the best way, if the actual teaching is increasingly differentiated and individualized and a well-functioning co-operation among teachers exists.

In Switzerland it has been recognized during the last years that heterogeneously composed classrooms demand teaching methods of great variety. Therefore a special curriculum for intercultural education has been developed and is being used at the regular education colleges (EDK-Dossier 60). A further curriculum to be used at these colleges with regard to special education is in preparation.

Observations made during an interregional study (Geneva, Neuenburg, Ticino) demonstrated that the more problems pupils have with their tasks, the more teachers tend to

'help' them. This goes so far as to produce a paradoxical situation: if children do well on a task, teachers let them work and thus facilitate independent and responsible learning behaviour. If children have problems, teachers offer help, take them 'by the hand' and guide them to their goal. Thus the situation can arise where individualized teaching can lead to impeding – maybe even preventing – the development of necessary learning processes. This in part has to do with teachers wanting or needing to prove the usefulness of their endeavours (SKBF 93:080).

In the earlier-mentioned study at the University of Freiburg (1995) in regard to the effect of integrating versus separating forms of schooling for pupils with learning difficulties it was also found that in classes with successful integration the classroom climate was positively influenced, the class was heterogeneously composed and the teacher involved was a fully trained and qualified special educator (SKBF 95:053).

5.15.3.5 *Attitudes and patterns of thinking*

A longitudinal study in Chur with the topic of communication and failure in school dealt with the following question: how do the theoretical thinking patterns of teachers in regard to learning disorders and difficulties in school affect the assessment of performance. The results show that the experiences and thinking patterns of teachers have a decisive influence on assessment of students and therefore also on their further development (SKBF 91:045).

An interregional study (Geneva, Neuenburg, Ticino, 1993–96) demonstrated that those involved (school psychologists, teachers, support teachers, speech therapists) have different views about the reasons for school problems, according to their professional backgrounds. Psychologists do not hesitate to define intelligence and classroom teachers point to family situations to explain problems in school. In addition children with school problems seem to get divided into two types; the ones more likely to have psychological and social problems (mostly boys from middle income families, with Italian mother tongue, first-graders) and the ones more likely to have specific problems in specific subjects (mostly girls of foreign background and from lower class families) (SKBF 93:080).

5.15.4 Classroom practices and emotional outcomes

The findings in regard to general self-esteem of integrated pupils with learning disorders show contradictory results (Bless, 1995a, 1995b). Compared to pupils with learning disorders in special classes, pupils in integrated settings have a significantly lower self-concept in regard to their cognitive abilities. The same is true for children who are hearing impaired, but not for children with physical handicaps who stand out in integrated classrooms with a generally positive self-concept. This latter group, however, through constant interaction with those non-handicapped, develops a stronger consciousness of their physical differences than do children in special classes (Bless, 1995a, 1995b).

The liking or disliking of school on the part of pupils with handicaps does not depend on whether they are being taught in an integrated or segregated setting. Investigations into social maturity, personality development, general anxiety, motivation to achieve and level of achievement could not demonstrate any kind of difference between the two types of schooling (Bless 1995a, 1995b). It needs to be mentioned, however, that these investigations were concerned with the comparison of different kinds of schooling and not with classroom instruction and its influence upon the emotional development of the learners. Concerning this

latter subject hardly any research results are currently known.

5.15.5 Classroom practices and social outcomes

Bless (1995a, 1995b) investigated the social acceptance of children with handicaps in regular classrooms. Independent of a particular type of schooling, school system or length of integration, the social position of pupils with handicaps within regular classes has to be considered as relatively difficult. Especially pupils with learning disabilities and behaviour disorders are part of the group which is not well accepted in regular classes. This negative finding is not true for all kinds of handicaps. Children with hearing, visual and physical handicaps as well as with mental retardation can very well experience acceptance in regular classrooms.

In a case study (written questions and observations) marginally functioning immigrant children in three classrooms, the complex interactions were described from three different points of view: the learners, the teachers and the observers. The same phenomenon was perceived and interpreted in different ways, all according to the individual point of view. For example, cultural differences in strategies of making contact, of negotiating, or of self interpretation reinforced the contrast in perception and were the source of unconscious misinterpretations which were difficult to analyse or to eliminate (SKBF 96:070).

5.15.6 What are the main problems of classroom practices?

As mentioned before, comparisons of different systems of schooling have a long tradition in Switzerland while there is still only little research in the field of classroom practices. At the same time, only few didactic instruments to be used for integrative classroom models have been developed (aside from the well-known workshop type of teaching and other individualizing methods). Teachers feel inadequately prepared to deal with the complexity of teaching classes made up of culturally, socially and cognitively heterogeneous groups of pupils. The combination of teachers within a school is definitely monocultural in Switzerland, a fact which does not necessarily help in dealing with heterogeneous groups of learners. A number of attempts have been made to help solve these problems, e.g. additional coursework in special education and intercultural education for classroom teachers. A further didactic challenge still lies ahead concerning the special teaching of the gifted within integrated settings.

It needs to be mentioned that the earlier TIMSS studies as well as the PISA studies examined mainly the lower secondary school level. Data in regard to the primary school level, as would be needed for this particular report, is lacking so far. Also pupils with handicaps are generally excluded from the above reports, which narrows the data for special education even more.

Support measures which are being offered outside the regular classrooms have not been sufficiently researched either. The pupils are usually taken out of the regular class for specific support teaching (‘pullout’ method). This means that compared with the other pupils remaining in the classroom these children have fewer lessons and therefore have less time to accomplish the goals of their class. A number of investigations have shown how important the co-ordination between regular classes and support teaching is in order to reach optimal integration: but, is this enough? The question of to what extent support teaching within the

regular classroom would be a more effective alternative cannot be answered on the basis of the now available research data.

The questionable success with class repetition as well as the findings of the lower cognitive concept of integrated pupils with learning disabilities point to the fact that research on additional topics and further didactic developments are needed.

5.15.7 Which groups of pupils with SEN cause the most problems within mainstream classes?

The question of whether organization and methods of integrative teaching vary depending on the types of handicaps can be only superficially answered due to very sparse data. Most of the results known refer to the integration of pupils with learning disabilities. The following results, however, need to be pointed out.

The positive influence of integration upon the development of learning for children with diverse handicapping conditions has been adequately proven in newer research. This, however, is not true for pupils with physical handicaps. Due to the large variety of such handicaps no positive statements can be made for either one of the two different ways of schooling (Bless, 1995a, 1995b).

As mentioned earlier, the findings in regard to general self-esteem show that compared to pupils with learning disorders in special classes pupils in integrated settings show a significantly lower self-concept in regard to their cognitive abilities. On the contrary, pupils with physical handicaps within an integrated setting demonstrate a generally positive self-concept. However, the constant interaction with non-handicapped peers helps develop a stronger awareness of their physical differences than is the case in the special education setting (Bless, 1995a, 1995b).

Bless (19950a, 1995b) also investigated the social acceptance of children with handicaps in regular classrooms: independent of a particular type of schooling, school system or length of integration, the social position of pupils with handicaps within regular classes has to be considered as relatively difficult. Especially pupils with learning disabilities and behaviour disorders are part of the group which is not well accepted in regular classes. This negative finding is not true for all kinds of handicaps. Children with hearing, visual and physical handicaps as well as with mental retardation can very well be accepted in regular classrooms..

5.15.8 Summary: what works?

So far the following important and positive factors in regard to successful integration of pupils with (learning) disabilities into regular classrooms have been established through research:

- co-ordinated co-operative efforts between classroom teacher and special education personel (special education teachers, school psychologists, speech therapists etc.);
- a common and shared vision of an integrative school and community model by regular and special education teachers;
- individualized teaching (regarding methods of teaching, textbooks and teaching materials);

- analysis of experiences and thinking patterns of classroom teachers and special education personel (e.g. reasons for school problems etc.), because these attitudes influence greatly the evaluation of the performance of pupils;
- analysis of didactic settings in order to avoid reinforcing dependence rather than independence on the part of pupils with learning disorders;
- heterogeneous make-up of classrooms in regard to cognitive potential of pupils – being aware of possible risks with specific class composition (regarding social background and percentage of foreign language pupils);
- positive classroom climate;
- high standards of training for special education teachers.

It is important to note that the class composition with its particular characteristics does not, alone, directly influence the performance of pupils. This influence has to be understood as a complex interaction at various levels in regard to school surroundings, schools, parents and classrooms. In recent years questions in regard to the effects of school systems and school organization had priority as research topics. In Switzerland there exist only a few research projects concerning themselves with the area of 'classroom practices', which establish correlations between ways of teaching and learning performance. However, a few current projects are looking into ways of teaching in more detail:

- Within the framework of the National Research Programme, one project (1997–2002) is investigating the psychological, social and instructional mechanisms which lead certain groups of learners to school failure. Its goal is to focus the research on the interaction among learners and between learners and teachers. Special attention will be directed to the ways new relationships are being established, as to how roles and status evolve, how learners take part in instruction and what types of problems emerge during the various phases of learning and evaluation (SKBF 99:076).
- A practical research project regarding reading skills (1999–2002) concerns itself with the instructional possibilities of differentiation and individualization in order to open the way for all learners to acquire sufficient reading competence (SKBF 00:011).
- The goal of a developmental project (1996–2000) is to develop strategies for integrative teaching and to establish in this particular area courses for regular classroom teachers in order to develop their skills in dealing with heterogeneous settings (SIDOS 5622).
- Finally, within the context of a further developmental project (1998–2001) to integrate children from difficult family backgrounds now in residential settings into regular classes, a teacher working as mediator is being introduced. She is to intervene on at least three levels:

    1. to improve co-operation among all concerned;
    2. to develop specific educational interventions and practical applications; and
    3. to address psychological mechanisms which lead towards stigmatization (SIDOS 6628).

The Swiss research documents are presented in Appendix M.

5.16 United Kingdom

Felicity Fletcher-Campbell, Working Partner United Kingdom

5.16.1 Introduction: overview of studies on classroom practice facilitating integration/ inclusion

Searches of the literature reveal a dearth of rigorous studies evaluating classroom practice supporting inclusion/integration, particularly by way of outcome studies. There is a corpus of literature on integration and inclusion generally – mostly opinion pieces or arguments for inclusion/integration on the grounds of 'equal opportunities' or 'human rights' or the virtues of social inclusion. Many of these are poorly argued and make scant reference to the relevant philosophical literature; they are not helped by a loose use of language.

There is also description of classroom practice and of the processes of education. Little of this is evaluated, certainly not in terms of long-term outcomes (e.g. quality of life or employability in adult life) or using common criteria, applicable across different types of special educational needs and across different contexts. In a review of research into further education provision for students with special educational needs, Bradley, Dee and Wilenius (1994, p. 53) note that:

> the field is dominated by discourse rather than research, by conjecture rather than evidence, by intuition rather than evaluation.

Sebba (1998), considering 'what works' in inclusion, relies heavily on North American literature in addition to some UK literature and notes similar deficiencies in the literature. She points out that studies rarely use multiple methods of data collection, are rarely longitudinal and often use 'secondhand' data – asking for practitioners' perceptions of practice rather than examining that practice at first hand. Furthermore, Sebba notes poor sampling and population definition; biased phraseology in research instruments; and the small scale of many projects – one school, LEA or district – which makes generalisability problematic.

There is presently increasing interest in the fact that, in the UK at least, practice has been developed and disseminated without any secure research base. While evidence from experience and informal practitioner reflection are important, and cannot be ignored, yet it is salutary to note the lack of any systematic attempt to reveal the underpinnings of practice that is often described in the literature as 'effective'.

In the UK literature, there is a tendency towards the stance that 'effective pedagogy' is pedagogy that is effective for all pupils, regardless of their needs or the particular context. There is a broad set of common features such as clear aims and objectives, rigorous monitoring, careful questioning to elicit comprehension, varied teaching methods and clear presentation. However, these are so broad as to be unhelpful and less attention is given to the way in which these principles are worked out with different learners in different situations. The literature which presents highly contextualized case studies tends not to identify the common principles. Furthermore, in a UK-based review of effective teaching of numeracy (Askew, Brown, Johnson *et al*., 1997), it was found that some of these common features were found in the classrooms of both effective and less effective teachers, suggesting that more detailed analysis is needed.

Considerable attention is given in the literature to aetiology and descriptions of the

differences in pupils with particular syndromes – for example, Down's syndrome. However, the differences in themselves do not imply that these groups require teaching methods that are different from those which are effective with other pupils. Lewis and Norwich (2000) point out that studies of difference between pupils with and without special educational needs do not necessarily identify factors which are the cause of the difficulties and therefore relevant to teaching objectives (Reason *et al*., 1988).

The evidence from the literature is that pupils with special educational needs may require different emphases or different balances within a programme or more intense teaching. For example, the review of Jordan, Jones and Murray (1998) on educational interventions for pupils with autistic spectrum disorders suggests that critical factors include those common to all pupils (such as parental involvement and social interaction) as well as those directed towards the particular needs and learning style of pupils with autistic spectrum disorders (the use of visual cueing and explicit teaching of specific generalization strategies). Other evidence comes from a recent review on literacy acquisition for pupils with severe special educational needs (Fletcher-Campbell, 2000), which suggested that there were few groups of pupils who needed qualitatively different teaching. However, teachers had to be aware of the effect of developmental or language delay on the way in which these pupils would respond to the curriculum. For example, pupils with visual impairment might well use language inaccurately and so it was important that teachers honed their skills of eliciting comprehension. Furthermore, pupils with particular special educational needs often needed a curriculum that was balanced differently from that of their peers, with a greater focus on one aspect of literacy, for example; or one that was paced differently – not just slower overall but taking into account a particular developmental delay (pacing and balance did, thus, interact).

Another study of science teaching for pupils with moderate learning difficulties (Mastropieri *et al*., 1997) suggested that these pupils, once told a rule, would need to be shown how to apply it, whereas other pupils would be able to learn the rule inductively. Lewis and Norwich (2000) reach similar conclusions regarding 'special' pedagogy as opposed to different emphases on 'normal' pedagogy. They cite the following examples of these different emphases: more practice to achieve mastery, more examples to learn concepts, more experience of transfer, and more careful checking for preparedness for the next stage of learning.

There is, of course, considerable intra-group difference in a group of pupils with ostensibly similar special educational needs. For example, pupils with a hearing impairment might have similar technical assessment and audiograms but very different abilities in lip-reading or using residual hearing. These differences would affect the degree to which phonetics – which is a favoured technique in UK classrooms at present – would be appropriate to them. Similarly, there is evidence that the challenge is to assess interventions appropriate to individual pupils, and to identify pupils' preferences, rather than to make statements about the efficacy of particular interventions *per se*: for example, some visually impaired pupils prefer large print, others will use low vision aids. Often, these preferences are affected by non-disability/pedagogical related issues such as the bullying that pupils experience if they use a particular technical aid (Fletcher-Campbell, 2000).

The literature also reveals the part played by different early years' experience on pupils' ability to make use of learning opportunities once they are in school. This is particularly the case as regards literacy, which itself is a *sine qua non* of curriculum access for many pupils, certainly within the context of Europe. It is not so much that pupils have difficulties with

specific literacy skills as that they lack the richness of language experience which lays the foundations for skill acquisition. This is relevant to the issue of teacher expectation. For example, Bray *et al*. (1988) cite work which suggests that teaching strategies are less important determinants of pupil learning than some aspects of teacher–pupil interaction. There is evidence for this in the field of hearing impairment too: studies have shown that deaf adults are more effective teaching deaf pupils than hearing teachers as they share their perspectives and understand their approaches to meaning-making (Fletcher-Campbell, 2000).

Following an extensive review of the literature, Lewis and Norwich (2000) conclude that there is a lack of evidence to support special educational needs specific pedagogy and that it may be unhelpful to categorize pupils in terms of types of special educational needs or cognitive ability; rather, they suggest, it may be more useful to group pupils in terms of learning styles.

5.16.2 Evidence related to general effective classroom management and strategies

As mentioned earlier, there is a corpus of studies on integration/inclusion, which considers the environmental features which are necessary for effective classroom practice to flourish. Some of the data relate to the relationship of the inclusive school to the wider community while others have an explicit relevance to classroom practice. The latter are included in this review.

5.16.2.1 *School management facilitating inclusive classrooms*

A study carried out at the National Foundation for Educational Research (NFER) (Lee and Henkhusens, 1996) analysed the general conditions needed to develop classrooms which could include pupils with special educational needs and highlighted the fact that, whatever the quality of practice in individual classrooms, inclusion will not be a possibility for all pupils within a community unless schools take responsibility for setting up the conditions for effective practice in all classrooms. Relevant findings were:

- where schools were given a budget which they had the discretion to allocate, they were able to ensure more flexible and appropriate support;
- appropriate levels of coverage and expertise as regards support in the classroom were most effectively secured by a team of teachers and learning support assistants;
- setting (grouping pupils by ability across an age cohort) was considered to make most effective use of resources as support could be targeted at the lower ability sets; however, bottom sets could represent a wide range of ability and needs;
- learning support staff were valued in classrooms and requests for them exceeded the staff hours available;
- where there was a learning support teacher attached to a subject department, there was greater scope for departments to consider the needs of all pupils, to develop schemes of work and to discuss individual cases to decide on coherent approaches;
- learning support teachers worked most effectively where they were involved with all pupils in a class rather than just selected individuals;
- subject teachers needed encouragement to consider the implications of information received about pupils with special educational needs;

- different approaches to differentiation were considered appropriate according to the subject: in English, by outcome; in science by different levels of schemes of work; in mathematics, by individualized schemes;
- teaching strategies were mostly extensions of those already used – 'good teaching' – rather than specific approaches for specific difficulties.

5.16.2.2 *Movement from special to mainstream school*

Two UK research studies have tracked pupils with significant special educational needs who experienced placement in both mainstream and in special school. Both studies highlight the very obvious fact that placement is only the starting point: it is essential to monitor and evaluate the pupils' experiences in mainstream classrooms to ensure that is appropriate and that they are included in appropriate teaching and learning. A study of the process of the closure of a special school and placement of all the pupils in mainstream schools with support from staff previously employed in the special school generated a wealth of data; of particular relevance to classroom practice were the following:

- those supporting individual pupils must have clear lines of management and work as a team with the class teacher;
- pupils were included by a range of classroom strategies: altering the format of the lesson, changing the arrangement of groups, changing the way in which instruction was delivered, adapting goals, using different materials, providing alternative tasks;
- social relationships in inclusive classrooms were enhanced by: carefully structured joint activities, opportunities for co-operation in classwork, altered classroom layout and organization, systems for facilitating peer co-operation (peer tutoring, buddying systems, circles of friends etc.);
- mainstream teachers benefit by on-going support and advice with including pupils with significant difficulties;
- non-contact time needs to be available for joint planning between teachers, support assistants and co-ordinator.

The other study is older (and predates the official date parameter for this review) but is worth mentioning as it is unique; it monitored the experiences of five pupils with special educational needs at primary–secondary transfer (Bennett and Cass, 1989). It showed that the quality of pupils' experience in mainstream classrooms in secondary school was compromised by lack of curriculum continuity and poor assessment of skills on entering, and by lack of extension work. Only two of the five pupils were more engaged in their work in ordinary school than they had been in special school. The study produced evidence that successful integration and classroom inclusion, where pupils move from segregated to ordinary schools, depends on very close liaison between the schools; the transfer of relevant records about attainment, aptitudes and learning styles; careful curriculum planning; and effective differentiation of both the curriculum and assessment in the mainstream school.

5.16.2.3 *Differentiation*

It is rare to find a study of integration/inclusion that does not mention 'differentiation' – the term is broadly understood in the UK as provision of teaching and learning experiences which

are designed to take into account, and be appropriate for, a wide range of pupil ability, aptitude and preferred learning styles. While most reference is to differentiation of the curriculum, differentiation of assessment is now acknowledged to be of equal importance. There are many 'models' of differentiation strategies. Studies indicate that, whatever the encouragement of differentiated practices, teachers' competence in differentiation is variable (Lee and Henkhusens, 1996).

The participation of pupils with special educational needs in mainstream classroom is best promoted by purposeful, enthusiastic teachers, who are clear in their directions and instructions and draw on pupils' previous experiences; participation can be discouraged by low expectations (Booth *et al*., 1998). There is also evidence that mutually respectful pupil/teacher relationships are critical (Ainscow *et al*., 1996); this is borne out strongly in studies of older pupils who are 'disaffected', usually on account of unmet learning difficulties or behavioural difficulties (Cullen and Fletcher-Campbell, 2000).

A major research study undertaken at the National Foundation for Educational Research (Weston *et al*., 1998) examined current issues in differentiation and studied a range of practice in primary and secondary schools. The main findings were:

- those supporting individual pupils must have clear lines of management and work as a team with the class teacher;
- pupils were included by a range of classroom strategies: altering the format of the lesson, changing the arrangement of groups, changing the way in which instruction was delivered, adapting goals, using different materials, providing alternative tasks;
- social relationships in inclusive classrooms were enhanced by: carefully structured joint activities, opportunities for co-operation in classwork, altered classroom layout and organization, systems for facilitating peer co-operation (peer-tutoring, buddying systems, circles of friends etc.);
- mainstream teachers benefit by on-going support and advice with including pupils with significant difficulties;
- non-contact time needs to be available for joint planning between teachers, support assistants and co-ordinator.

The study suggested that, in the light of the problematic nature of realizing differentiation effectively in the classroom and of recent national policy, the term differentiation will lose favour as practitioners focus on raising standards of achievement for all pupils. In order to effect this, the authors suggest that attention will turn from pupil grouping to teacher development. In particular, the following skills are critical:

- skills of using evidence to analyse and evaluate individual performance;
- skills of curriculum planning and target setting;
- pedagogic skills – making expertise explicit;
- skills in managing learning.

An interesting recent publication in the UK relevant to the present review is the *Index for Inclusion* (CSIE, 2000), a set of materials designed to support schools in a process of inclusive school development by self-review. The materials were developed via an action

research programme with a consortium of institutions in collaboration with LEAs and schools.

The desirable conditions for inclusive classrooms implied by the materials produced for school self-evaluation include the following:

- an induction programme to welcome new pupils to the school/classroom; this programme should be effective regardless of the time of a pupil's entry to the school/class, the previous attainment or the home language of the pupil; new pupils should be clear as to whom to go to if they experience difficulties;
- strategies to improve pupils' self-esteem;
- management and career structures for learning support assistants;
- focus on the pupil's perspective;
- collaborative training for support assistants and teachers;
- collaborative learning among pupils;
- attention to home–school communication;
- shared understanding of what constitutes bullying, a clear statement about bullying, support for pupils who experience bullying, the involvement of pupils in creating strategies to counter bullying;
- lessons are responsive to student diversity, accessible to all pupils and develop an understanding of difference;
- pupils are actively involved in their own learning, learn collaboratively;
- assessment encourages the achievement of all pupils;
- homework contributes to the learning of all;
- all pupils participate in activities outside the classroom;
- resources are distributed to support inclusion;
- staff expertise is fully utilized;
- pupil difference is used as a resource for teaching and learning.

5.16.2.4 *Specific teaching challenges: literacy*

It is generally accepted that one of the barriers to pupils' inclusion in the regular curriculum is their lack of literacy skills. A recent policy initiative in England (DfEE, 1998a), focused, in the first instance, on primary school teachers, encouraged a whole-class, holistic, approach to teaching literacy skills. A discrete review (Fletcher-Campbell, 2000) considered effective strategies to facilitate the acquisition of literacy skills in pupils with severe special educational needs (severe learning difficulties, hearing impairment, visual impairment and speech and communication difficulties). A team of reviewers, each expert in a particular field of special educational need, found a dearth of rigorous research data to support much of the classroom practice that is current in the UK.

The four general points which emerged from this review are relevant to the broader European Agency review of the evidence regarding inclusive practices generally.

First, and most importantly, each reviewer independently observed that the relevant research literature on literacy and pupils with significant special educational needs in his/her particular field was partial and insubstantial. This is partly explained by:

- the relatively late introduction of literacy into the curriculum for pupils with severe and profound and multiple learning difficulties;
- the relatively recent use of information and communication technology and the rapid development of the field, making longitudinal evaluation difficult;
- the partial nature of the evidence within particular fields, making comparisons between approaches difficult – e.g. in the field of visual impairment more research has been done on the use of braille text than on the use of large print text, largely because it is only relatively recently that technological developments have made the latter readily accessible in the field of ICT, word-processing has attracted the most attention and relatively few research studies have focused on access technology for groups with low-incidence conditions, or on more complex applications such as expert systems, assessment tools, simulations, multimedia design or web-based communication;
- the difficulty in 'matching' cohorts of pupils with special educational needs in order to do rigorous comparative studies;
- the absence, until very recently, of large sets of reliable comparative attainment data to assess the outcomes of different pedagogic approaches;
- the small numbers in cohorts, particularly of 'low incidence' special educational needs.

The result of these factors is that much of the literature is based on teacher/practitioner experience and opinion rather than on rigorous research studies. Practitioner experience is extremely valuable and may be authenticated by research; however, it cannot be accepted with confidence without scrutiny. At present, much of the work in the field of literacy and pupils with special educational needs is at an early stage of development, with small numbers and particular contexts.

Secondly, much of the existing literature confirmed or reinforced what is known about the acquisition of literacy with the 'normal' cohort of pupils. Yet some of this is presented as though it is unique. Cases tend to be, unsurprisingly, where 'findings' are conceptual rather than empirical. For example, a study in the US on reading achievement of partially sighted pupils found that those who did not read at home read less well than those who had books at home and therefore read more. Other studies – for example, showing the necessity of prerequisites for literacy (reading to children so that they are motivated to acquire reading skills themselves) – also relate closely to those for the majority population. Similarly, some studies suggest that it is difference in pacing or the degree of one-to-one attention, rather than qualitative differences in approach, that are beneficial to the acquisition of literacy skills for pupils with significant learning difficulties.

Thirdly, within relatively limited research areas, there is competition for attention. Some of the literature, though highly relevant to the wider field, is yet at the margins of relevance to this review which focuses on teaching strategies. For example, in the field of visual impairment, there is work on tactile perception, which may affect a pupil's ability to read in braille; or, in the field of hearing impairment, work on the maximum utilization of residual hearing. There is much description of the impairments which result in difficulties acquiring literacy.

Fourthly, while different studies make claims about the effectiveness of various interventions, there is consensus in the literature across the different areas of special

educational needs, that there is no single approach that is effective for all pupils, even within one area of disability. A sensory impairment interacts with a pupil's learning style, motivation, environment and previous experience. The essential message is, thus, that needs should be assessed individually and that the value of particular approaches should be assessed in relation to individual progress. There is also agreement that prediction of performance rests on frail grounds at present. Thus it is not possible to predict if a certain child will progress from symbols to text and, while there is a corpus of achievement data (a corpus which is likely to grow with more efficient recording procedures), these data can, and should, be challenged by different approaches to pedagogy and different teacher expectations.

The outcome of these characteristics of the literature is that it is apparent that craft knowledge, rather than research findings, is the principal influence on teaching strategies in this area. The review suggests that research is needed to confirm and/or systematize this craft knowledge and to explore issues which it does not address.

5.16.3 Outcome studies

5.16.3.1 *Introduction*

Hornby (1999) points out that the existing reviews of the literature on integration (mostly more widely focused than UK literature) are ambivalent regarding the effectiveness of inclusive programmes, which tend to be partial in their effects (Manset and Semmel, 1997). Hornby concludes that:

> there remains a lack of research evidence for the effectiveness of inclusive practices. Particularly notable is lack of studies demonstrating that the outcomes of inclusive programmes significantly improve the lives of young people with special educational needs.

He argues that policy is in advance of the empirical evidence to support it: indeed, in many cases, the evidence has not been collected. Consensus as to 'favourable conditions' for classroom practice (which is borne out in international studies) is at a broad level of generality: favourable school ethos; sufficient in-service training; adequate human and material resources (Hornby, 1999).

One of the problems in the UK is lack of common measures to assess comparative progress. These are beginning to be developed, used and refined (DfEE, 1998b) and there is increasing focus, within government policy, on outcome measures. It is anticipated that the revised Code of Practice (available autumn 2001) will shift the emphasis from the 'input' end (the process of identification and assessment of need) to the 'output' end (the identification and assessment of progress and achievement). This shift in focus has been reinforced by concerns about determining the budgets that should be available to support pupils with special educational needs. While attention is paid to the activity which is paid for from money designated for pupils with special educational needs, far less attention is paid to the outcomes of the resource input; activities are justified in terms of the identification of the pupils' needs rather than in terms of the efficacy of the intervention.

5.16.3.2 *Pupils with social/communication difficulties*

Literature on interventions with pupils with autistic spectrum disorders can be included within the section on 'social outcomes' as these interventions are, almost entirely, focused on

communication and social interaction. This is largely because it is the social difficulties of these pupils which provides the barrier to other learning.

A recent review of the literature on interventions for pupils with autistic spectrum disorders (Jordan *et al*., 1998) makes the point that although many pupils with autistic spectrum disorders are placed in ordinary classes in mainstream schools, there has been no research on the effectiveness of the approach compared to an approach whereby pupils are offered early specialist provision so that they can learn the skills which are necessary to gain access to education in a mainstream classroom. Indeed, the authors make the point that it is far from clear not only what these skills are but also what kind of classroom organization can both foster integration as well as meeting the educational needs of the pupils concerned. Data on outcome variables are needed together with research on working practices – in particular, the role of support assistants and the training needs of key staff.

Jordan *et al*. (1998) cite three studies which do provide some evidence that integration can aid the development of pupils with autistic spectrum disorders and that there are no adverse effects on other pupils in the mainstream classroom. The research studies carried out by Strain and Cordisco (1994) on the LEAP approach, by McGee, Daly and Jacobs (1994) on the Walden approach and by Harris, Handleman *et al*. (1990) all present data which show that integrated pupils made significant development gains. However, there were methodological weaknesses in each of these small-scale studies. Thus the evidence is positive and promising but inconclusive and a considerable amount of further work needs to be undertaken.

5.16.3.3 *Pupils with behavioural difficulties*

A search was done of articles in English using the keywords 'emotional difficulties, behavioural difficulties, and primary schools'. Twenty-eight relevant articles, fulfilling the criteria for the present review, were identified, of which only seven were based on work in the UK (24 were published in the US and Australia; three more were published in the UK in English but the work was undertaken in, respectively, the Netherlands, Spain and Norway). It should be pointed out that the 28 articles were drawn from an original sample of 300 which was identified using relevant keywords; the vast majority of this large sample had to be rejected on the grounds of being merely 'opinion' or using weak methodologies.

Of the UK studies, five related to interventions which are common in the UK: two on assertive discipline; two on nurture groups (early years/infant phase); and one on circle time (primary schools). It is significant that these were the only research studies located despite the ready acceptance of the interventions in UK schools. It should be noted that some of the identified studies do not meet the data parameter set for the present international review. They may, thus, be discarded. They are included here as the overall field was so poor.

5.16.3.4 *Assertive discipline*

Assertive discipline (Canter and Canter, 1986) was introduced from the US into the UK in the early 1990s (there will, presumably, be US studies located in the international search). It is an INSET package which aims to influence classrooms by increasing time spend on task and decreasing time spent on disruptive behaviour. It is used in ordinary mainstream classrooms where there is an element of 'ordinary' disruptive behaviour (i.e. the pupils do not necessarily have identified emotional and behavioural difficulties although received opinion states that pupils with identified emotional and behavioural difficulties operate more efficiently within orderly classrooms, so assertive discipline does, in fact, help them, albeit tangentially). The

class is given clear, unambiguous rules (e.g. about not leaving their seats or calling out in class) and there is continuous positive feedback when pupils abide by the rules, and a public and published hierarchy of sanctions for rule breaking; it is considered imperative that these rules are applied consistently, so a whole-school approach is vital.

Swinson and Melling (1995) did a pre-post intervention study in two junior schools, observing nine classes (years 3–6, pupils aged 7–11) for on/off task, nature and frequency of off task, and rate of teacher verbal approval/disapproval. They report positive outcomes by way of increase in appropriate on-task behaviour, decrease in frequency of disruption, increase in rate of praising (this affected the classroom atmosphere) and decrease of teacher verbal disapproval.

The other study on assertive discipline (Wood, Hodges and Aljunied, 1996) evaluated the effectiveness of training for assertive discipline (there are a number of commercial training courses, many run by the authors of the intervention; these are popular with UK teachers). They claim that studies in the US have reported:

- increase in time on task;
- decrease in out-of-seat, inappropriate behaviour;
- increase in use of teacher praise;
- decrease in teacher admonition;
- attributed to the (fair) use of sanctions and recognition (positive reinforcement, tangible rewards, privileges).

They designed a study with six control schools and six target schools (one nursery (up to age 5), two infant (ages 5–7), two primary (ages 5–11), one secondary (ages 11–16)). They observed 30-minute lessons in the core subjects (English, maths and science) and in history and geography. Observation data were complemented by data from teacher interviews and a questionnaire to all teachers who had received training in assertive discipline (AD). They found that:

- AD-trained teachers gave more positive recognition to pupils than non-trained (significant difference);
- AD trained teachers gave more positive than negative comments to pupils than non-trained teachers;
- the AD trained teachers gave a greater number of 'praises' and fewer reprimands than non-trained teachers for both social and academic behaviour (the figures for the difference in academic behaviour comments were not significant).

It should be noted that both these studies were focused on the short-term effects; the long-term effects and consequences of terminating the intervention, have not been studied.

5.16.3.5 *Nurture groups*

Nurture groups started in the UK in the 1970. They aim at early intervention and preventative work with pupils on reception to ordinary school. Pupils considered to be at risk of exclusion from mainstream classes on account of disruptive behaviour are placed, temporarily (the aim is for them to be in and out within three terms) in small groups which follow the normal

primary school curriculum but at a slower pace, with the emphasis on each child feeling involved with the classroom activity. As with assertive discipline, pupils are given clear, frequently rehearsed rules and there are minor sanctions, firmly applied, for not abiding by them. Importance is placed on a totally supportive environment. As pupils gain in confidence and self-esteem, so they are able to learn.

From observing practical outcomes, Bennathan (1997), an experienced practitioner, reports that nurture groups reduce both temporary and permanent exclusion from school for unacceptable behaviour, and the number of statements issued (these are given in the UK to children with significant special educational needs). However, Bennathan presents no hard evidence. Iszatt and Wasilewska (1997) compared the proportion of statements and of referrals to emotional and behavioural support services in two schools that were apparently similar but only one of which had a nurture group. They found that the school which had no nurture group had three times more statements, and seven times more referrals for support.

5.16.3.6 *Circle time*

Circle time (Moseley, 1999) is widely practised in UK primary schools. It involves regular timetabled slots in the curriculum when teaching groups are given the opportunity to reflect on and share experiences, concerns, strengths and weaknesses and to discuss, and arrive at solutions to, issues of concern to the group. It is used to enhance group interaction and empathy, and to combat bullying (by encouraging children to respect their peers). Emphasis is put on strict adherence to rules (e.g. no contribution must be derided, contributions should be made in turn), with the group formulating the rules. Again, while common, the focus of much INSET, and earning much practitioner praise, there is negligible rigorous evaluation. Kelly (1999) observed the introduction of circle time in a primary school where there was a lot of challenging behaviour on account of socio-economic circumstances and poor levels of literacy among the pupils. The teachers were deemed, by the researcher, to have good class management skills. Kelly found that there was:

- an improvement in pupils' self-confidence and self-reflection on their own behaviour;
- less confrontation (between pupils and between pupil and teacher);
- a reduction in incidence of serious disruptive behaviour;
- more sharing;
- more mutual support among the pupils.

Key features of the intervention were opportunities for:

- pupils to articulate feeling and ideas – leading to greater confidence;
- pupils to develop trust in the group;
- raising of awareness of self and the consequences of behaviour;
- a solution-focused approach;
- pupil-centred locus of control;
- increasing insight into 'difficult' behaviour.

However, again, it should be pointed out that this study was in one school only and that the data were 'soft' rather than 'hard'.

5.16.3.7 *Other studies*

The two remaining studies identified by the UK review were 'one-off' projects. The first examined the effects of a group of primary school pupils' taking responsibility for the monitoring of their own on/off-task behaviour (Wheldall and Panagopoulou-Stamatelatou, 1991). The authors report a pilot and main study. In the pilot, maths classes of pupils aged 9–10 (20 male, 10 female) were observed three times a week for four weeks in an urban schools in the West Midlands in England. On/off-task behaviour was monitored. Half the observed sessions were prior to the intervention and half after it. The intervention strategy was the introduction of pupils' self-recording (once per minute – at the prompt of a bleep) of whether they were on/off task. A set of positive criteria was established with the pupils to delineate on-task behaviour (e.g. pupil in seat, hand up for question or comment).

In the main study three year cohorts of pupils (aged 8–9, 9–10, 10–11 respectively) were observed in their English lessons and, within each class, three pupils were focused on – pupils who had been identified as frequently off-task and thus perceived as having behavioural difficulties. The researchers reported an increase in on-task behaviour for all classes and a reduction in teacher negative comment. The girls seemed able to maintain the new behaviour better than the boys after the intervention. The behaviour of all the targeted pupils except one improved and there was an increase in the quantity of writing produced. However, the authors point out the weaknesses of their own research design: the effect could have been the novelty effect, accuracy of the self-recording was in doubt, the cue (bleep) was distracting. As with so many studies of this nature, the value may have been in the process: discussion with the pupils as to what 'on-task' behaviour is, and the setting of individual targets for each pupil.

The final study reviewed investigated the effects of seating arrangements on task engagement in two primary school classrooms (Hastings and Schwieso, 1995). The overall findings were that on-task behaviour was higher when pupils were seated in rows (rather than groups) and that the pupils least on-task fared the worst in group seating arrangements.

In the first study school, two parallel classes of pupils aged 9–11 (15 male and 16 female; 18 male and 13 female), both with experienced teachers, were studied. An ABA model was applied whereby class one had:

- two weeks of group seating;
- two weeks of row seating;
- two weeks of group seating;

and class 2 had:

- two weeks of row seating;
- two weeks of group seating;
- two weeks of row seating.

This design eliminated the danger of the novelty factor. While the pupils preferred the group seating, the researchers observed that on-task behaviour was higher when both classes were seated in rows. However, there were intra-group differences. The least on-task pupils gained the most from rows and there was the less difference between the low, high and medium on-task groups when seated in rows – i.e. the behaviour was more homogeneous and the extremes were reduced. There was the most difference in behaviour intra-group when the

classes were seated in groups.

In the second study school there was concern with the behaviour of three pupils. There was only one change in the intervention – from group to row seating. The intervention improved the behaviour of all pupils in the class and the behaviour of the three disruptive pupils decreased considerably. Interestingly, the on-task level of the three disruptive pupils when seated in rows was higher than the mean for the class.

The study, while interesting, was limited in scope and, while commenting on behaviour, did not assess learning in the different arrangements not the quality of the engagement with the task. However, the authors pointed out that, in the course of observation, they identified the fact that many pupils were given individual tasks to do while seated in groups: thus the seating arrangement did not seem to match the nature of the task. This would seem to be an interesting focus of research, given that the English National Curriculum requires different types of work (e.g. individual, small group, whole class).

5.16.4 The main problems regarding inclusion

5.16.4.1 *Type of special educational needs*

There is consensus among practitioners that pupils who present the greatest challenge as regards inclusion in mainstream classrooms are those with emotional and behavioural difficulties. This is the area of greatest pressure on places in segregated provision and where new special schools and units are opening. There are three strands to the issue.

First, teachers are mindful of their responsibility to all pupils in the group and reluctant to maintain a pupil within a teaching group if that pupil, despite support, is disrupting the learning of all the other pupils. Secondly, teachers are often concerned that their own skills are inadequate to meet the needs of pupils with severe emotional and behavioural difficulties and are loath to take responsibility for a pupil unless there is adequate support. Thirdly, there may be a lack of resources available in mainstream schools to provide adequate support for pupils with severe emotional and behavioural needs. These issues can be related to the management and organization of support services for emotional and behavioural difficulties. Some of these support services work directly with pupils but, more often, they work on whole-school strategies.

There is a reported increase in the severity of the emotional and behavioural difficulties with which pupils are presenting in schools. This is exacerbated in some areas – for example, the London boroughs – by the particular needs of asylum seekers and children traumatized by events in their own countries experiencing civil war as well as being isolated by language barriers.

There is concern that there is a group of pupils with mental health difficulties whose needs are not being addressed and who cannot be touched by educational interventions on their own: here, there is a need for effective interagency collaboration to support any educational initiative.

Disaffection is a considerable issue in the UK and a key element in the government's social inclusion programme; pupils in the primary phase are also identified within this group. There is an extensive literature on strategies and approaches to address disaffection. Many approaches seek learning opportunities outside the ordinary classroom, in recognition of the fact that, particularly in the last two years of statutory schooling (ages 14–16), the needs of

disaffected young people are best met by innovative approaches. However, some schools which are taking initiatives as regards provision for disaffected pupils are scrutinizing their curriculum with regard to the way it has failed these pupils and there is evidence that this is having a downward effect on the curriculum (Cullen and Fletcher-Campbell, 2000) and may, in the future, reduce the number of young people becoming alienated from education.

The other main group of pupils for whom inclusion is difficult throughout the UK, with notable exceptions, is those with autistic spectrum disorders. This is largely because there is sufficient awareness for teachers to know that these children need a highly specialized pedagogy and, certainly in the early years, a substantial input of one-to-one attention, yet insufficient training and, often, insufficient resources, for there to be expertise available for these pupils in mainstream classrooms. Examples of good practice are available, albeit rare, and highlight the fact that it is not so much inclusion *per se* that is the critical factor but the provision of specialist support. For example, in a recent survey conducted by the National Autistic Society (Barnard, Prior and Potter, 2000), it was found that parental satisfaction did not relate to the mainstream/special school factor: parents of pupils in non-specialist special schools were less likely to be positive about their child's education than were parents of pupils placed in specialist special schools and in mainstream placements with specialist support.

5.16.4.2 *The educational climate and demands on the teaching profession*

Teachers are, generally, reporting an increasingly heavy workload as they respond to various government initiatives aimed at raising standards of achievement for all pupils. This results in less time, energy and inclination for 'extra' activities. The negotiations, preparation and collaboration necessary for successful inclusion falls into the category of 'extra' activities unless it is securely embedded within a school culture and expectations. This is not a comment just on attitudes to inclusion: there is evidence, for example, that teachers are not so keen to seek promotion by taking on additional management responsibilities for which there may be minimal allowances in terms of financial remuneration and non-contact time.

Furthermore, in some schools, there may be a reluctance to offer places to pupils who are considered 'hard to teach' as these pupils may lower aggregate assessment scores and lead to less favourable overall school standards of performance.

5.16.4.3 *Conceptual difficulties*

The situation regarding inclusion in the UK is exacerbated by conceptual difficulties. These are, probably, shared to some degree with other countries. For example, there is insufficient consideration to whether schools should, *per se* and inevitably, be inclusive or whether schools should prepare young people to be able to make an effective transition to society and be able to participate and be included within that society for the rest of their lives, even if this means a period of segregated education during statutory schooling.

Little attention is given to pupil preferences and the way in which they can make significant contributions to school communities and gain self-esteem and confidence within different environments: some young people may prefer a small (special) school rather than be one of many in a large comprehensive school – this, of course, applies equally to pupils with and without learning difficulties. It is a largely unresearched issue.

Finally, there are limits to the concept of 'inclusion' (see Wilson, 1999 and 2000). There are hard and often ostensibly unpalatable issues but, unless they are faced, 'inclusion' may

continue to evade the grasp of practitioners and policy-makers.

The UK research documents are presented in Appendix N.

6 Synthesis of findings

Working partners of the European Agency for Development in Special Needs Education have submitted country reports (N = 15) that contain an overview of the existing literature in their languages and descriptions of current problems within the context of inclusive education in their countries.

The countries that participate in the classroom practice project have, albeit in very diverse ways, reported about the 'state of the art' concerning the question: which practices have proven to be effective in inclusive education? An international review, mainly identifying American studies, was added to this database in order to get a wider, deeper and more thorough comprehension of effective practices.

In the second phase of this classroom practice project, an attempt will be made to select examples of good practices and to describe these in a systematic way. In the last phase exchanges between different countries will be organized in such a way that transfer of knowledge and practices will be maximized.

In this chapter the synthesis of findings will be presented alongside three topics that are considered as essential for the next phase of the classroom practice project: the selection and analysis of case studies.

In the first place it is important to reflect systematically upon the type of special needs that bring the most challenges in the daily practice of teachers and other professionals. Here the focus is on the characteristics of pupils that are being included (or excluded). In other words: which groups of pupils with SEN cause the most problems within mainstream settings?

Secondly, it is intended to provide an overview of the challenges within education processes itself: what are the main (educational) problems in countries concerning the issue of classroom practice within mainstream classrooms that include pupils with SEN? Countries have reported an extensive overview of the current challenges within education when attempts are made to achieve inclusive education.

Thirdly, and this refers to the main task of the current study, countries have reflected on empirical studies in order to identify an answer to the question related to the educational practices and factors that were found to be effective for inclusive education. When countries more or less agree about the type of educational interventions relevant for inlusion, the next phase of the study (examples or case studies) can be arranged in a more systematic way. This contributes to a more detailed focus on how these interventions and factors are being shaped and dealt with in daily practice.

6.1 Challenging types of special needs

In answering the question concerning the most challenging types of special needs, countries have reported in a – not so astonishingly – unanimous way. Behaviour, social and/or emotional problems are mentioned by almost all countries as being the biggest challenge within the area of inclusion of pupils with specal educational needs. This includes problems relating to unmotivated pupils and problems related to disaffection.

Of course quite a number of countries report difficulties in answering the question that is put in terms of child characteristics. Within most special education policies such an approach

is rejected in favour of a more environment-interactive approach to special educational needs. It is within the educational context where challenges are being met and where the need for interventions is centred, instead of putting child characteristics at the centre of the debate. Although this position is in accordance with other current views on special needs, a view that is shared widely within member states of the European Agency, the Working Partners reported the fact that the biggest challenges relate to pupils with behavioural problems.

Some countries mentioned other – and sometimes very specific – types of special needs that were felt as challenging within the area of inclusive education. Examples of these were ADHD, dyslexia, autism, specific learning and writing difficulties, mental and intellectual disabilities, severe hearing impairments and multiple disabilities. However, these were mentioned by only a few countries, whereas the position of pupils with all sorts of behavioural and emotional difficulties was generally reported as being challenging.

6.2 Educational challenges within the context of inclusion

Partly based on empirical data, but also on existing and widespread views within countries, Working Partners of the European Agency for Development in Special Needs Education, have given very detailed answers to the question of the most challenging educational interventions, consternations and factors when dealing with pupils with special educational needs in the mainstream classroom.

It shows that handling or dealing with differences or diversity in the classroom forms one of the biggest challenges within European classrooms. It is formulated in many different ways but this is the general theme that covers the diverse answers of Working Partners. Inclusion can be organized in several ways and on different levels, but in the end, the teacher has to deal with a larger diversity within his or her class and has to adapt or prepare the curriculum in such a way that the needs of pupils with SEN and their peers are sufficiently met. In other words, handling diversity is the key issue at the classroom level.

When dealing with differences in the classroom teachers need an extra pair of hands or extra support from either colleagues (or special education teachers) or other professionals. At times a pupil with SEN needs specific help or instruction that cannot be given by the teacher during the daily classroom routine. Here other teachers and support personnel come on to the scene and the issue of good planning, co-operation and team teaching forms a challenge. This is not only relevant at the level of the classroom in the case of co-operative teaching, but also on the school level. In some cases professionals from regional support services are needed and this amplifies the need for good planning, co-operation and co-ordination. Inclusive education implies more than just dealing with diversity in classrooms. It leads to the challenges of co-teaching (classroom level), team teaching (and the need for good co-operation between teachers, on the school level) and co-ordination with professionals from other support services.

6.3 Effective practices within the context of inclusive education

Before discussing the factors that have shown to be effective within inclusive education, it needs to be stated that in general (both from country studies as from the international literature review) inclusive education seems to be a realistic phenomenon. Moreover most of

the sources reveal that pupils perform better in an inclusive setting compared to segregated provision. This is in accordance with studies from other organizations (e.g. the OECD, 1995) and sources (see for example the special issue of the *European Journal of Special Needs Education* 3, October 1993).

The reports of the Working Partners underline the finding that, in general, the development of pupils with SEN is at least equal and sometimes better in mainstream settings compared to placement in separate special provision. It seems important to stress this finding again in this report, since it should not be overlooked when dealing with the issue of inclusive education. It is not only a normative discussion, where positions are taken on the basis of normative, emotional or other views and feelings, but also a clear empirical finding. The reports of some countries clearly emphasize this finding.

The reports of the Working Partners, with their country-based reviews and the findings of the international literature review, point to at least five groups of variables that seem to be effective for inclusive education. These are discussed below.

6.3.1 Co-operative teaching/co-teaching/team teaching

Studies from European countries and studies from other international (mainly American) sources reveal that inclusive education is enhanced by several factors than can be grouped under the heading of co-operative teaching. Teachers need (practical) support from an extra teacher (special education teacher or another colleague) and/or from his or her colleagues, head teacher and other professionals. Both for the development of academic and social skills of pupils with SEN this seems to be an effective way of working. Clearly, additional help and support needs to be well co-ordinated and planned.

6.3.2 Co-operative learning/peer tutoring

Both country reports and other international sources show that peer tutoring or co-operative learning is effective in both cognitive and affective (social-emotional) areas of pupils' learning and development. Pupils that help each other, especially when they have unequal levels of ability, profit from learning together. Moreover, there are no indications that the more able pupil suffers from this situation, in terms of missing new challenges or opportunities. In addition, the findings point to progress within both the academic and social areas.

6.3.3 Individual planning

Pupils with SEN improve academically from systematic monitoring, assessment, planning and evaluation of the work that has to be done during the school day. In this way instruction can be adapted and geared to the student's needs and additional support can be introduced adequately.

6.3.4 Collaborative problem solving

Particularly for teachers that need help in including pupils with social/behavioural problems, findings in quite a few countries and in the international review show that a systematic way of

approaching undesired behaviour in the classroom is an effective tool for decreasing the amount and intensity of disturbances during the lessons. Clear class rules and a set of borders, agreed with the pupils (alongside appropriate incentives and disincentives) have proven to be effective.

6.3.5 Heterogeneous grouping/flexible instruction/differentiation

Finally, country reports show that a more differentiated approach in education is necessary and effective when dealing with a diversity of pupils in the classroom. Targeted goals, alternative routes for learning, flexible instruction and the abundance of homogenous ways of grouping enhance inclusive education. This finding is of high importance given the expressed needs of countries within the area of handling diversity within classrooms.

Many more specific factors were mentioned in the country reports, but the above-mentioned factors, grouped in five main categories were predominant.

Several reports mention the importance of contextual factors on effective classroom practices, such as school organization, external support services and local and national policy-making. Also financial conditions and teacher training and attitudes have a clear impact on classroom practice.

Given the goal of the project – revealing, analysing and transferring effective classroom practices – it can be expected that these above mentioned variables will be used in the next phase of the project: the selection of examples of good practice. In that phase of the project not only the classroom practice itself, but also the contextual factors will be taken into account.

Appendices

Appendix A Documents: international literature review

Author and title	**Banerji, M.** and **Dailey, R.A. (1995)** A study of the effects of an inclusion model on students with specific learning disabilities
Publication details	*Journal of Learning Disabilities* **28**, 511–22
Language	English
Country of origin	US
Type of research	Qualitative and quantitative
Methodology	Elementary students with Specific Learning Disability (SLD) in grades 2–4 were served with Normal Achieving (NA) students in inclusive, mixed-grade pods called 'houses'. A pod consists of four classrooms with a central, common work area, and is taught by a team of four teachers, with a specialized teacher in SLD serving as a fifth member of the team. Students with SLD in grade 5 were placed in an inclusion classroom with general education peers, with the SLD teacher co-teaching with the general education teacher. All students were provided with an age- or grade-appropriate curriculum in the inclusive classroom/house; no children were excluded from any available educational opportunity; co-operative learning and peer instructional strategies were often used, and special education support was provided in general classroom/house.
Sample	The study was conducted in Seven Springs Elementary School, located in the Paso County School District in west-central Florida (approximate pop. 37,000). In the first part of the study, the sample consisted of a fifth-grade inclusion class with 13 students with SLD and 17 NA students. In the second part, 10 teachers provided their perceptions of growth of all 45 students with SLD and 38 randomly picked NA students served within the grade 2–4 inclusion houses. This number represented 58% of total students (139) served. Teachers sent parents of the same students the parent survey. In part 3, anecdotal records were maintained by the SLD and mainstream teachers within the inclusion teams in grades 2–5.
Method of research	In part 1, NA students are compared to students with SLD on reading, spelling, attitude, motivation and self-concept. In part 2, parent and teacher surveys were used, and in part 3 anecdotal information was maintained based on observations of teachers, parents and external observers.
Main findings	Findings suggest that students with SLD made some academic and affective gains at a pace comparable to that of NA students. Parent and teacher surveys indicated improved self-esteem in students with SLD, and, in some cases, improved motivation. Anecdotal data suggested reduced stigma for students with SLD.
Evaluative commentary	The study would have been stronger had a comparison group been available of students with SLD served in a pullout resource programme.

Author and title	**Fuchs, D, Fuchs, L.S., Mathes, P.G.** and **Simmons, D.C. (1977)** Peer-assisted learning strategies: making classrooms more responsive to diversity
Publication details	*American Educational Research Journal* **34**, 174–206
Language	English
Country of origin	US
Type of research	Quantitative
Methodology	The primary purpose of this study is to explore the effectiveness of Peer-Assisted Learning Strategies (PALS), a version of Classwide Peer Tutoring, by comparing the reading progress of three learner types (low-achieving with and without learning disabilities and average-achieving pupils) to corresponding controls. PALS was conducted during regularly scheduled reading instruction, 35 minutes per day, 3 times per week, for 15 weeks. Teachers paired all students by ranking them on reading performance. The top-ranked student in the stronger half was paired with the strongest reader in the weaker half. Teachers were advised to determine whether the students were socially incompatible. If so, a coupling was changed. Within a pair, the role of tutor and tutee was reciprocal. Pairs remained together for 4 weeks, after which the teacher announced new pairings. Students engage in three strategic reading activities: partner reading with retell (each partner reads aloud for 5 minutes to increase students' oral reading fluency; after partners complete their turns, the lower performing reader retells for 1 minute in sequence what had been read), paragraph summary (students read aloud one paragraph at a time and attempt to identify the subject and main idea by responding questions printed on a cue card) and prediction relay (the reader makes a prediction about what will be learned on the next page, reads aloud from the page, confirms or disconfirms the prediction, summarizes the text, makes a new prediction and turns to the next page). In addition to assigning students to pairs, teachers assign pairs to one of two teams, giving PALS a competitive and co-operative dimension. Students earn points by reading without errors, working hard, behaving co-operatively, identifying correct subjects, making reasonable predictions and checking predictions. Points are awarded by tutors and teachers and recorded on scorecards. At the end of the week, the teacher totals the teams' points and announces the winner. Members of the winning team stand and are applauded by the second-place team. After 4 weeks, new team assignments are made. Teachers use whatever reading materials they believe are appropriate, the programme does not require teachers to acquire, develop, or modify materials. The No-PALS teachers conducted reading instruction in their typical fashion. They were told that the purpose of the study was to examine how teachers accommodate student diversity, they were not informed that they were a control group.
Sample	Participants were 120 students from 40 classrooms (grades 2–6) in 12 schools representing 3 districts. All teachers identified 3 students in their reading class: a learning disabled (LD) student certified as such in reading in accordance with state regulations, a nondisabled but low-performing (LP) student, and a student estimated to be an average achiever (AA). These 120 target students (3 students x 40 teachers) were the only pupils on whom data were collected systematically.
Method of research	Comprehensive Reading Assessment Battery (CRAB) was used to measure pre-treatment, post-treatment and growth scores. PALS fidelity, an observation checklist comprising 23 teacher and 112 student behaviours was developed. Teachers completed questionnaires to express their views of the academic and social benefits of PALS, students were interviewed to explore student satisfaction. Teachers completed instructional plan sheets to specify the number of days devoted to each skill, the materials, grouping arrangements, motivational strategies, activities to be employed and the number of minutes planned for each activity.

Main findings	Findings indicate that LD, LP and AA students in PALS classrooms made significantly greater progress than their counterparts in No-PALS classrooms across the three reading measures. Teachers believed PALS had positively affected their LP, LD and AA students' reading achievement and social skills (although they seemed to view PALS as benefiting LD and LP children more than AA students). All PALS students expressed a belief that the treatment had helped them to become better readers.
Evaluative commentary	Technical assistance from the project staff may be seen as a study limitation because it restricts the capacity to generalize results to other situations where this sort of help is absent.

Author and title	**Fuchs, L.S., Fuchs, D., Hamlett, C.L.** and **Stecker, P.M. (1991)** Effects of curriculum-based measurement and consultation on teacher planning and student achievement in mathematics operations
Publication details	*American Educational Research Journal* **28**, 617–41
Language	English
Country of origin	US
Type of research	Quantitative
Methodology	Teachers were assigned randomly one of three treatments: (a) Curriculum-Based Measurement (CBM) with recommendations about the nature of instructional adjustments (expert system instructional consultation, CBM-ExS); (b) CBM without ExS advice (CBM-NExS); and (c) control (no CBM). Teachers in both CBM conditions employed CBM to track pupil progress toward operations goals for 20 weeks. This computer-assisted monitoring comprised: (a) goal selection and ongoing measurement on the goal material (teachers determined an appropriate level on which to establish each student's goals; using a standard measurement task, teachers assessed each pupil's performance at least twice weekly, each time on a different test representing the type and proportion of problems from the goal level they had designed); and (b) evaluation on the database to adjust instructional programs (each week, teachers employed software to graph the students' scores automatically, apply decision rules to the graphed scores, get feedback about those decisions, and conduct a skills analysis of the students' responses to the test items). Whenever prompted by the graphed decision rules, teachers were asked to adjust the student's programme. CBM-NExS teachers determined the nature of their adjustments on their own. CBM-ExS teachers relied on the ExS for advice about the nature of adjustments. Control teachers were directed to use their standard procedures for monitoring student progress for their low-achieving students targeted for the study and for adjusting students' instructional programs when it appeared that these students were not responding successfully to instruction.
Sample	Participants were 33 teachers in 15 schools in a southeastern metropolitan area. Each teacher selected two students for whom treatment effects would be evaluated. These students were in grades 2–8, were chronically low achieving in mathematics, and had been classified as learning disabled or emotionally disturbed according to state regulations. In the CBM-ExS, CBM-NExS, and control group respectively were (a) 14, 15 and 15 boys and 7, 5 and 7 girls; (b) 5, 6 and 7 minority and 16, 14 and 15 non-minority students; and (c) 20, 16 and 20 learning disabled and 1, 4 and 2 emotionally disturbed pupils. Students were comparable on age, grade, math grade level, years in special education and IQ.
Method of research	Observations were conducted to assess the accuracy with which teachers implemented treatments. Student accuracy in entering information during computer testing was indexed through the Student Computer Observation. At the end of the study, the number of instructional adjustments introduced by teachers during the study was reported on a post-treatment questionnaire. Nature of instructional adjustments was coded from instructional plan sheets. To assess achievement, pre- and post-treatment tests were conducted.

Main findings	The control group made reliably fewer instructional changes than either CBM group, which made comparable numbers of changes. The CBM-ExS teachers used the following procedures for more weeks than did the CBM-NExS teachers: (a) used self-talk or an alternative algorithm to structure instruction, (b) structured test feedback to improve student motivation for optimal CBM performance and (c) incorporated timed mixed-problem drill for maintenance. On the other hand, CBM-NExS teachers provided instruction by re-explaining/reviewing the algorithm previously used for instruction and providing practice on the re-explained algorithm for more weeks than did the CBM-ExS teachers. Tests indicated that for digits and problems, the achievement of the CBM-ExS group exceeded the achievement of the CBM-NExS and the control groups.
Evaluative commentary	Results indicated that CBM was not uniformly related to superior student achievement. Rather, only the combination of CBM and consultation to support teachers' use of sound instructional adjustments resulted in differential achievement.

Author and title	**Fuchs, L.S., Fuchs, D., Hamlett, C.L., Phillips, N.B.** and **Bentz, J. (1994)** Classwide curriculum-based measurement: helping general educators meet the challenge of student diversity
Publication details	*Exceptional Children* **60**, 518–37
Language	English
Country of origin	US
Type of research	Quantitative
Methodology	Teachers were randomly assigned to three treatments: (a) Curriculum-Based Measurement with instructional recommendations (CBM-IN, N = 10), (b) CBM without instructional recommendations (CBM-NoIN, N = 10), (c) a contrast group (no CBM, N = 20). Teachers in both CBM-IN and CBM-NoIN conditions employed CBM for 25 weeks. CBM consisted of: • weekly measurements (teachers assessed each pupil's performance weekly, on a test representing the grade level's annual operations curriculum; each test comprised 25 problems, at grades 2–5, respectively students had 1.5, 2, 3 and 5 mins to complete the test; teachers administered the test in whole-class format, responses were entered into a computer program that scored the test and managed the data); • student feedback (software summarized each pupil's performance in terms of a graph, displaying total number of digits correct over time and a skills profile, showing student's mastery status on each type of problem included in the years curriculum; teachers taught students to read and interpret graphs and skills profiles in two 20-min sessions; they also taught students to ask themselves questions about their graphs); • teacher feedback (twice monthly, teachers received a computer-generated copy of each student's graph and skills profile, and a report summarizing the performance of the class). The CBM-NoIN teachers received descriptions of performance; in the CBM-IN condition the report provided descriptions of performance, as well as instructional recommendations for: (a) what to teach during the whole-class instruction, (b) how to constitute small groups for instruction on skills on which students experienced common chronic difficulty, (c) skills and computer-assisted programmes each student should use for the next two weeks, and (d) classwide peer tutoring (CWPT), listing students who required and those who could provide assistance with skills. Contrast teachers used their standard procedures for monitoring student progress, providing student feedback, and planning their instruction.
Sample	40 general education teachers (Grades 2–5) participated in this study. Each of them had included at least one student with an identified learning disability in their mainstream math instruction. Teachers identified three students for whom treatment effects would be evaluated: • one student who was chronically low achieving in mathematics, and had been classified as learning disabled according to state regulations (LD); • one student who was chronically low achieving in mathematics but had never been referred for special education assessment (Low-Achieving); • one student whose mathematics achievement was near the middle of the class (Average-Achieving).
Method of research	• Treatment fidelity: Observations and interviews were conducted to assess the accuracy with which CMB-teachers and students implemented treatments. • Instructional planning: teachers wrote descriptions of their instructional plans each week. Analysis was conducted on these data. • Achievement: analysis was conducted on pre- and post-treatment tests between subjects (CBM-IN vs. CBM-NoIN vs. contrast) and within subjects (LD vs. LA vs. AA). • Satisfaction: CBM teachers completed a questionnaire that included questions about their satisfaction.

Main findings	• Treatment fidelity: CBM-IN teachers implemented CWPT and computer-assisted instruction more than CMB-NoIN teachers. • Instructional planning: Compared to CBM-NoIN teachers, CBM-IN teachers reported (a) addressing more skills, (b) teaching more operation skills, (c) providing more one-to-one instruction, (d) delivering more instruction by a peer, (e) using systematic motivation systems more frequently. • Achievement: In the CBM-NoIN condition, the achievement of 4 out of 10 LA students surpassed that of their contrast treatment peers, whereas in the CBM-IN condition the achievement of 9 out of 10 LA students surpassed that of the mean growth of their contrast treatment peers. In both CBM conditions, the achievement of 7 out of 10 AA students surpassed that of the mean growth of their contrast treatment peers. In both CBM conditions the achievement of only 6 of 10 LD students surpassed that of the mean growth of their contrast treatment peers. • Satisfaction: Teachers' overall satisfaction with CBM was high, regardless of treatment condition; however, CBM-IN teacher rated their treatment reliably higher than did CBM-NoIN teachers.
Evaluative commentary	Unfortunately, this study failed to separate the effects of the various components of the advice sections of the CBM-IN report. It is not known whether teachers may have effected similar outcomes with one or more instructional practices like computer-assisted instruction and CWPT without the use of CBM.

Author and title	**Jenkins, J.R., Jewdl, M., Leicester, N., Jenkins, L.** and **Troutner, N.M. (1991)** Development of a school building model for educating students with handicaps and at-risk students in general education classrooms
Publication details	*Journal of Learning Disabilities* **24**, 311–20
Language	English
Country of origin	US
Type of research	Quantitative
Methodology	Three treatments were introduced in school 1. The Houghton Mifflin reading series was adapted to the Co-operative Integrated Reading and Composition (CIRC) procedures developed by Stevens, Madden, Slavin *et al*. (1987). CIRC was implemented primarily on the sixth-grade reading and language arts programme; the only exception to full implementation of CIRC was the absence of lessons for the direct instruction of reading comprehension. Portions of the CIRC procedures (vocabulary, partner reading, and story-related writing) were implemented in grade two. A cross-age tutoring program was established for the first-, second- and third-grade remedial and special education students. Intermediate-grade students who were skilled readers tutored these students in reading. Roughly 35 students received tutoring, which was scheduled 4 days a week for 25 minutes daily. All specialists and aides were assigned classrooms in which they provided assistance to low-performing students. The only students who were pulled out for instruction were those who received peer tutoring and several students who received additional math or spelling instruction. In contrast, most specialists in school 2 removed their students from their classroom for remedial or special education.
Sample	Two elementary schools participated in this project. School 1 embarked on a programme of innovations and school 2 served as a comparison. The total student populations of schools 1 and 2, including kindergarten, were 374 and 715, respectively. All students in grades 1–6 in school 1 (332) and a sample of students in grades 1–6 in school 2 (209) participated in this research. In school 1, 20 students were classified as learning disabled (LD), 2 as mildly retarded (MR), and 1 as having a serious behavioural disorder (SBD). In school 2, totals were 32 LD, 1 MR, and 2 SBD.
Method of research	Pre- and post-tests on achievement, social behaviour and teacher perceptions were administered to students of both schools.

Main findings	Findings relevant to the 3 treatments are reported separately. The CIRC programme failed to show effects on oral reading or most of the BASS (Basic Academic Skills Samples yields an index of student achievement in math, written expression, spelling and reading) measures, regardless of student type (regular, remedial, special education). One exception was a significant effect on a BASS writing subtest favouring students who received CIRC. Given the previously reported success of CIRC in boosting reading and writing achievement, authors are at loss to explain the lack of effects in the present study. Most aspects of the CIRC programme were implemented, except for the reading comprehension lessons, and the home reading programme. Perhaps these components are critical for this programme's effectiveness. The effects of cross-age tutoring were similarly disappointing. The findings run counter to the research literature on peer tutoring, which usually shows that tutoring enhances achievement. Perhaps the content of the programme, which devoted considerable time on teaching isolated words, was not appropriate. A second explanation is that tutoring was actually effective, but other aspects of the students' remedial programme were weak. The tutoring programme may have compensated for other services that were less effective than normal. On at least one dimension (service delivery), substantial differences existed in the two schools. Between 85% and 100% of the students in school 1 versus 22–44% of the students in school 2 received instruction in their classroom from specialists. However, on most achievement measures, special and remedial education students in school 1 did not differ over those in school 2. One exception was a significant effect on the BASS math test, favouring special education students in school 2 over those in school 1. Similarly, implementation of the new support services model in school 1 had no measured effects on social behaviour.
Evaluative commentary	Introducing 'best practices' (e.g. co-operative learning and cross-age peer tutoring) into a school does not automatically result in improved achievement.

Author and title	**Kamps, D.M., Barbetta, P.M., Leonard, B.R.** and **Delquadri, J. (1994)** Classwide peer tutoring: an integration strategy to improve reading skills and promote peer interactions among students with autism and general education peers.
Publication details	*Journal of Applied Behavior Analysis* **27**, 49–61
Language	English
Country of origin	US
Type of research	Quantitative
Methodology	• Baseline: Reading instruction consisted of teacher-directed lessons using a basal reading series with individual variation in activities among the three classrooms. Activities such as vocabulary reviews, reading aloud, story starters, workbooks and independent reading were frequently used in each of the classrooms. • Classroom wide peer tutoring (CWPT): All students were trained for three 45-min sessions on CWPT procedures. CWPT consisted of 25–30 mins of peer-mediated instruction that occurred 3–4 days a week as a supplement to baseline reading instruction. Each week students were assigned a tutoring partner and were then assigned either to the red or the blue tutoring team. During tutoring, the learner read from the same reading materials used in the baseline while the tutor scored points on a point sheet for correctly read sentences. The tutor also provided positive and corrective feedback. Following reading, the tutor asked 3 mins of comprehension questions. Tutor–learner roles were reciprocal. Teachers monitored tutor–learner performances and gave students bonus points. At the end of each session, students orally read scores to the teacher, who publicly posted and announced a 'grand-total'. • Unstructured free-time groups: Immediately following reading instruction during baseline and tutoring conditions, students engaged in 15–20 mins of social time. Classroom areas were set up with activities to promote social interactions. Some general rules were announced prior to free time (e.g. 'be nice to your friends', 'every student must join a group').
Sample	Participants were 3 male students with autism and their peers who were enrolled full-time in general education classrooms in three suburban elementary schools. The students with autism were considered to be high functioning, as indicated by intellectual capabilities, language skills, and academic skills, but were lacking in social skills. • M. was 8 years old, placed in a first/ second-grade classroom with 11 students without disabilities, 1 student with behaviour disorders, and 3 students with learning problems. • A. was 8 years old, placed in a second-grade classroom with 17 non-disabled students and 1 student with learning disabilities. • P. was 9 years old, placed in a third-grade classroom with 19 non-disabled students and 2 students with learning disabilities. Academic and social skills performance data were collected for the 3 target students and 14 of their peers (6 students with learning disabilities, and 8 non-disabled students).
Method of research	Immediately following peer tutoring, students independently read that session's passage for a 2-min. timed reading, to measure rate of words read correctly and reading errors. Immediately following each 2-min. timed reading the experimenter asked five comprehension questions (who, what, were, when, why). Observations were conducted during unstructured free-time activities that occurred immediately reading instruction to determine the frequency and duration of social interactions between peers.

Main findings	The findings indicated that classwide peer tutoring was an efficient and effective strategy for increasing the academic achievement and social interactions of students with autism and their non-disabled peers. Specifically, CWPT positively affected academic achievement for the majority of the students by increasing reading fluency, and correct responses to reading comprehension questions. Mixed results, however, were noted for error rates across conditions. An additional positive finding was that the occurrence of CWPT appeared to influence students socially by increasing the duration of social interaction time during unstructured free time activities immediately following sessions. Teachers strongly agreed that CWTP was easily implemented.
Evaluative commentary	Limitations of the study include the small number of target students, minimal effects of some peers, and few data points in the second baseline condition.

Author and title	**Mastropieri, M.A., Scruggs, T.E., Mantzicopoulos, P., Sturgeon, A., Goodwin, L.** and **Chung, S. (1998)** 'A place where living things affect and depend on each other': qualitative and quantitative outcomes associated with inclusive science teaching
Publication details	*Science Education* **82**, 163–80
Language	English
Country of origin	US
Type of research	Qualitative/quasi-experimental methods
Methodology	Students in the target/inclusion classroom received instruction from the 'ecosystems' unit of the science and technology for children series. These materials were developed by the National Science Resources Centre and were designed to provide children with opportunities to learn science by participating in direct observation, manipulation and experimentation with materials in physical, life and earth sciences. Comparison classes were taught comparable science content on ecosystems, based on the adopted textbook for the school corporation, with associated worksheets, activities and teacher presentation. In the inclusion class, teachers frequently teamed students into small groups of two or three students, based on knowledge of witch students would work well together. Each group was presented three plastic bottles. They planted seeds in one bottle, filled another with water, plants, snails, and guppies, and used the third bottle as a sleeve to connect the terrarium and aquarium, completing the 'ecocolumn'. Students then designed experiments in which one ecocolumn was designated as experimental and another as control. In the inclusion class, the teacher also used recommendations from the special education teacher and from a book on adapting science activities for students with disabilities.
Sample	Three fourth-grade classroom teachers and one special education teacher from an elementary school in a small Midwestern town participated in this investigation. The special education teacher and one of the fourth-grade teachers had requested permission to team-teach during science class in order to accommodate the fourth-grade students with disabilities who were all mainstreamed for science period. 5 students with disabilities were included in the target classroom during science; 2 students were classified as having learning disabilities; 1 was classified as mildly handicapped; 1 as emotionally handicapped; and 1 as multiply disabled. The student with multiple disabilities had fine and gross motor difficulties, communication difficulties, and used a motorized wheelchair. The target classroom contained 19 non-disabled students. The two textbook-based classrooms contained 40 students.
Method of research	Qualitative data sources: all meetings of the inclusion classroom were observed over a 7-week period. All classes were videotaped, and field notes were taken during each visit. Quantitative data sources: pre- and post-tests were conducted, based on questions presented in the textbook. All students were given a survey of their attitudes toward science.

Main findings	Qualitative results: Analysis of videotape records, transcripts of class dialogue, field notes, student products, teacher's notes, and planning materials, and principal, teacher and student interviews confirmed that the seven critical inclusion variables, previously observed by Scruggs and Mastropieri, were very much in evidence in this inclusive science classroom. 1. Administrative support: interviews provided evidence for administrative support for inclusion efforts. 2. Support from special education personnel: observations and interviews also documented support from the special education teacher, she not only provided critical assistance to students with disabilities, she functioned effectively as a co-teacher, directing whole class activities in very many instances. The two teachers met at least once a week after school to discuss the events and plan. 3. Open, accepting atmosphere: Observations, transcripts, and interviews documented the open, accepting atmosphere in the classroom. 4. Appropriate curriculum: Overall, the curriculum was seen to be highly appropriate for the needs and interests of all students. Presentations and activities were highly concrete and meaningful and the entire unit was observed to be highly motivating to all students. Language and literacy requirements of science learning, particular problems for the students with disabilities, were minimized by the curriculum. 5. Effective general teaching skills: observations and transcripts also revealed the effective general teaching skills of the classroom teacher. Lessons were highly structured, teacher presentations and directions were clear, redundant, and delivered with enthusiasm, instruction proceeded at an appropriate pace, and student engagement with the unit was maximized. 6. Peer assistance: also readily apparent was a high level of peer assistance. This was delivered in the form of assistance with reading and writing activities, explanations of relevant concepts, assistance with physical procedures, and encouragement. 7. Disability-specific teaching skills: finally, teachers exhibited a high level of disability-specific teaching skills. Careful selection of peers was particularly helpful in keeping the student with an emotional handicap involved in the science activities. Learning for students with cognitive or intellectual handicaps was facilitated by use of spatially organized charts and diagrams, mnemonic illustrations, and adapted worksheet, study guides and lab books. Vocabulary practice activities were used to provide additional practice for students who had difficulty learning new vocabulary. Quantitative results: • Achievement: descriptive analyses of scores of the five special education students suggest that those students collectively scored at or above the mean of the class (except for the pre-test scores), and substantially higher than the mean of the comparison classes. Of the three groups, the special education students made the descriptively highest gains in pre-post-test mean scores. • Attitudes: students in the inclusion class reported more positive attitudes toward science than students in the comparison class. The effective implementation of inclusive, hand-on science instruction resulted not only in successful participation of students with a variety of disabilities in science classes, it also resulted in successful science achievement of these students.
Evaluative commentary	Although there were two comparison classes, there was only one inclusion class, raising the possibility that some other variable unique to that classroom (such as the addition of the special education teacher) contributed to the treatment effects. It is also unknown how a similar group of disabled students may have fared in the textbook-based classrooms. Finally, it should be noted that the two teachers in the inclusion classroom spent a very substantial amount of time and energy planning and evaluating this science unit outside of the normal school day.

Author and title	**Saint-Laurent, L., Dionne, J., Giasson, J., Royer, E., Simbard, C.** and **Piérard, B. (1998)** Academic achievement effects of an in-class service model on students with and without disabilities.
Publication details	*Exceptional Children* **64**, 239–53
Language	English
Country of origin	Canada, Québec
Type of research	Quantitative
Methodology	The programme tested in this study, the intervention programme for students at educational risk (PIER-programme d'intervention auprès des élevès à risque) is fully integrated into the classroom and combines the best practices proposed in the past few years by research studies in education. It includes four components: (a) collaborative consultation (weekly 60-min. meetings of the general and special education teachers to determine goals, analyse observations, share responsibilities and plan up-coming instruction periods); (b) co-operative instruction (special education teachers spent 3 hours per week in the class); (c) parent involvement (all parents were encouraged to monitor their child's educational progress at home; teachers maintained continual contact with parents through regularly scheduled teacher-parent conferences, IEP (individualized education programmes) meetings, and written communication); (d) strategic and adapted instruction in reading, writing and mathematics. (Teaching focuses on helping students, especially those at educational risk, to become strategic learners and to develop a positive attitude toward school subjects. Teachers make adaptations for students at risk of failure (they modify materials or give them more time to complete a task) and they provide them with suggestions and support to improve their study skills.) The comparison teachers continued using general education teaching methods, characterized by instructing the entire class and minimal co-operation between the general and special education teacher regarding teaching. Resource classroom services were provided to the special education students.
Sample	A total of 606 white, French speaking, 3rd-grade students from 26 schools (one general education class per school) participated in the study. Classes contained a mean of 24 students per class. Schools were located in the two main urban areas of the province of Quebec. A total of 276 students came from high SES schools, 148 from middle SES schools, and 182 from low SES schools. Four criteria were used to identify students at risk of school failure: (a) low results on grade 3 academic tests of reading, writing and mathematics (at or below scores of lowest 3% of students); (b) teaching ratings of abilities in reading, writing and mathematics; (c) grade retention; (d) identification as special education students by the school. The treatment group consisted of 288 students (145 girls, 143 boys). Of these, 79 met the at-risk criteria. Of these, 34 students were identified as special education students by the school, 27 had LD, 5 had behaviour disorders (BD), and 2 had hearing impairment (HI). In the comparison group, among 318 students (139 girls, 179 boys) 86 students met one of the four at-risk criteria. Of these 38 were identified as special education students (32 with LD, 4 with BD and 2 with communication disorders).
Method of research	Pre-test/post-test on reading, writing and mathematics.
Main findings	Significant effects were found on writing scores for students at risk and on reading and mathematics scores for general education students. No significant treatment effects were detected for students with learning disabilities.
Evaluative commentary	It is impossible to determine which specific component is responsible for the various effects.

Author and title	**Salisbury, C. L., Evans, I.** and **Palombaro, M**. **(1997)** Collaborative problem-solving to promote the inclusion of young children with significant disabilities in primary grades
Publication details	*Exceptional Children* **63**, 195–209
Language	English
Country of origin	US, Johnson City.
Type of research	Qualitative
Methodology	CPS process instruction was provided in a half-day (3 hr) session by the principal investigator and the project co-ordinator. The session involved discussion and role-play to impart information on the following: • the rationale for inclusive schooling practices; • a working knowledge of what physical, social and instructional inclusion might look like; • an overview of criteria used to screen potential solutions; • instruction in the 5-step CPS itself. When the process was introduced to the students a CPS session occurred when teachers identified a physical, social or instructional instance of exclusion: 1. Identify the issue: 'what's happening here?' 2. Generate all possible solutions: 'What can we do?' 3. Screen solutions for feasibility: 'What would really work?' 4. Choose a solution to implement: 'Take action' 5. Evaluate the solution: 'How did we do? Did we change things?' Implementation of planned CPS sessions was documented by using videotape, audiotape and written records.
Sample	Johnson city is among the poorest communities in the southern tier of counties in New York State. It is an area with many Russian, Eastern European and Amerasian families. 10% of the students have a first language other than English. The district serves approximately 1200 students, grades K-12, 120 of who are classified as evidencing a disability. Data reported in this investigation were collected in one elementary school serving approximately 650 students with and without disabilities in grades K-4. In year 1, participants included 4 general education teachers, approximately 100 students without disabilities, 17 students with mild/moderate disabilities, 12 students with severe/profound disabilities, and 2 special educators; 3 project staff, 1 fulltime project co-ordinator and 1 graduate student were involved in the project. In year 2, 3 general educators in grades K-4 volunteered to implement CPS, 7 paraprofessionals and 4 parents participated in the in-service sessions. In addition, 165 students without disabilities received instruction. All participants from year 1 opted to continue in year 2.
Method of research	Field notes, observations, interviews
Main findings	The teaching staff judged CPS as an important strategy for promoting the physical, social and instructional inclusion of students with disabilities in their classroom. Perceived outcomes identified by the teachers and project staff from field notes, observations and interview sources of data: students develop concern for others, accept and value diversity, empowered to create change, work with others to solve problems, develop meaningful ways to include everyone, foster understanding and friendship. Students used perspective talking, advocacy, creative thinking and communications skills to change classroom routines. The use of the CPS process moved at least to the level of 'routine' and in most cases 'integration' among the teachers involved in this project.
Evaluative commentary	Whereas direct documentation of planned CPS sessions was effective, spontaneous sessions were more difficult to capture. Many spontaneous sessions were not documented. The number of occasions in which the process was attempted but failed is not reported. The outcomes occurred in an environment that values diversity, shares decision-making with students and staff, promotes belonging and connectedness at all levels of the organization, and grounds instruction in mastery and co-operative learning.

Author and title	**Salisbury, C., Gallucci, C., Palombaro, M.** and **Peck, C. (1995)** Strategies that promote social relations among elementary students with and without severe disabilities in inclusive schools
Publication details	*Exceptional Children* **62**, 125–37
Language	English
Country of origin	US
Type of research	Qualitative research
Methodology	Phase 1 consisted of individual semi structured interviews with each of the purposefully selected teachers. Interviews included a series of questions designed to identify strategies the teachers used and thought were useful in mediating the development of social relationships among students with and without severe disabilities. In addition, a minimum of 3 hours of direct observation was conducted in each participant's classroom to corroborate the reports provided by the teaching staff and inform the interpretation of the interview data. Consensus on five prevailing themes was reached through discussion and comparison of data segments. Five themes emerging from the analytic process were used as input into phase 2 of the investigation. Phase 2 consisted of focus-group interviews. Participants were asked to provide any additional examples of strategies they found useful in promoting social relationships among students with and without disabilities.
Sample	General education teachers in two inclusive elementary schools serving students in grades K-6 participated in this study. All teachers (N = 18) had served or were serving at least one student with a moderate or severe disability full time in their classroom within the past 12 months. Five teachers in each of the two schools were selected from the initial pool on the basis of observed ability to promote positive social outcomes between children with and without severe disabilities in their classroom. The remaining teachers participated in focus-group interviews.
Method of research	Individual, semi structured interviews with teachers, classroom observation, focus-group interviews

Main findings	Five themes that represented categories of strategies that teachers used to influence the development of social relations between children with and without disabilities in inclusive schools emerged from both the interviews and the focus groups: 1. Active facilitation of social interactions: • Co-operative grouping; every teacher stated that the use of co-operative learning groups was an essential strategy for promoting positive social interactions. • Collaborative problem-solving; teachers felt that working together around issues of mutual concern enabled students to learn more about others and strengthened the likelihood that positive social interactions would occur. • Peer tutoring and classroom roles; teachers created jobs in each classroom. Students functioned as an assistant to the teacher for a week. Students also assisted the teacher by taking care of their disabled friends. In keeping their commitment to equity they provided assistance to any child who might need help. • Structuring time and opportunity; teachers felt strongly that classroom schedules needed to allow both the time and the opportunity for students to connect and just be together. This was seen as an important condition for the development of social relationships. 2. Turning it over to kids: teachers spoke of their students as resources in promoting the social inclusion of students with severe disabilities. Implicit in this perception was willingness on the part of teachers to release control for decisions to students and to value the insights that students brought to bear on classroom issues. 3. Building community in the classroom: beyond their commitment to be inclusive, teachers intentionally worked to build a climate of concern for others. 4. Modelling acceptance: teachers consistently reflected on the importance of modelling an attitude of acceptance for all children in their classrooms. 5. Organizational influences: teachers spoke of many ways their work was supported by specific practices and policies within the school such as collaborative teaming, shared teaching responsibilities, innovative classroom organizational practices and assigning clusters of students from the prior year together.
Evaluative commentary	Limitations of the research: • though the described classroom practices were effective according to the teachers, no experimental analyses to evaluate the practices directly were carried out; • major questions exist about the extent to which these practices would be equally effective in other school contexts or as implemented by other teachers. The authors believe the teachers who participated in this project were unusually skilled.

Author and title	**Self, H., Benning, A., Marston, D.** and **Magnusson, D. (1991)** Cooperative Teaching Project: a model for students at risk.
Publication details	*Exceptional Children* **58**, 26–34
Language	English
Country of origin	US; Minneapolis
Type of research	Qualitative research
Methodology	All students are screened in readiness or reading. If students are at risk of academic failure, they are placed in a supplemental group. Ongoing placement decisions are made based on students' responses to interventions as shown by weekly progress monitoring. Special education, chapter 1, and compensatory education teachers provide 25 minutes of supplemental reading/readiness instruction in small groups 5 days a week to at risk students. Language/language clinicians provide 25 minutes of small group supplemental instruction 3 days a week to students with the most limited language skills. All supplemental groups meet in regular classrooms during scheduled reading periods to minimize disruptions and increase learning time. Teachers learn strategies from one and other as they teach in classrooms together. All teachers attend scheduled meetings to review progress, co-ordinate instructional plans and share instructional strategies. All students are evaluated using curriculum-based measures three times a year and compared to district-developed normative information. Reading progress of all students is monitored weekly with formative evaluation procedures. Staff is trained to monitor, chart and interpret individual reading and readiness progress using trend lines and individual progress goals. All instructional changes are documented on individual progress-monitoring charts. At the end of each school year, staff is asked to rate effectiveness of the project and list suggestions for future years.
Sample	Hiawatha Elementary school, a Minneapolis public school, has 470 students in grades K-3. The students come from an urban environment; 44% are minority. Primary staff involved in the co-operative teaching project includes 14 regular classroom teachers, two compensatory education teachers, two chapter 1 tutors, two special education teachers and one language/language clinician. The co-operative teaching project (CTP) serves approximately 170 Hiawatha students in grades K-3 each year. The major goals of the project are to reduce the discrepancy in reading and readiness skills of high-risk students and their peers, and to increase classroom teachers' repertoire of instructional strategies to use with low-achieving students.
Method of research	• A single-subject time series analyses of pupil learning rate while students were taught in both a CTP and non-CTP condition during an academic year was used to evaluate the effectiveness of co-operative teaching. During year 2 this analysis was conducted for 9 students; during year 3 the learning rate of 28 students was analysed. • The impact of CTP was examined by looking at the average reading performance of each grade level during autumn, winter and spring. • To analyse the effect of CTP on special education, the number of referrals made to special education over a 3-year period was examined. • A co-operative teaching questionnaire was used to evaluate teacher attitudes.
Main findings	• Data show that students taught with this model made significant gains. • There appeared to be an overall positive effect on the progress of all students. • The project had a definite impact on special education; the majority of students receiving CTP were able to progress at or above district expectations without being labelled or pulled out for special education. • Teacher attitudes toward CTP were positive and regular education teachers assumed primary responsibility for instructing students at risk. • There was a significant increase of co-operative planning between regular and special education staff.

Evaluative commentary	Limitations of the research: • The data are of a descriptive rather than experimental nature. • The findings are restricted to one school and a limited range of grades, K-3. Co-operative planning and in-service training time is essential to improving communication, increasing instruction skills, and ensuring the commitment of all involved staff. Approximately $3000 was spent each year for staff development.

Author and title	**Stevens, R.J.** and **Slavin, R.E. (1995a)** The cooperative elementary school: effects on students' achievement, attitudes, and social relations.
Publication details	*American Educational Research Journal* **32**, 321–51
Language	English
Country of origin	US
Type of research	Quantitative
Methodology	The treatment schools adopted the co-operative elementary school model, which uses co-operation as an overarching philosophy to change school and classroom organization and instructional processes. The components of the model include: 1. widespread use of co-operative learning in academic classes (teachers are trained to use two co-operative models: Co-operative Integrated Reading Composition (CIRC) and Team Assisted Individualization-Mathematics (TAI)); 2. mainstreaming learning disabled students in regular education (the learning disabled students receive all their instruction in the regular classroom; special education teachers teach with regular classroom teacher using CIRC or TAI; learning disabled students are integrated into heterogeneous co-operative learning teams); 3. teachers coaching one another ('peer-coaching' provides teachers with many opportunities to visit one another's classes and provide support and feedback to one another); 4. teachers collaborating in instructional planning; 5. principal and teachers collaborating on school planning and decision-making; 6. principals and teachers encouraging active involvement of parents. The comparison schools continued to use their regular teaching methods and curriculum. The comparison schools did not use an in class-model for mainstreaming special education students. Both the treatment and comparison schools allocated the same amount of time to reading, language arts and mathematics instruction daily, in compliance with school district guidelines.
Sample	The sample consisted of 1,012 students in second through sixth grades in five elementary schools of a suburban Maryland school district. 21 classes in the 2 treatment schools were matched with 24 classes in the 3 comparison schools on the mean California achievement test scores for total reading, total language, and total mathematics. The student populations ranged from 4% to 15% minority students (M = 7.2%). The schools were all located in predominantly working-class neighbourhoods. Approximately 9.3% of the five schools' student populations were identified as learning disabled.
Method of research	• Achievement pre-tests on total reading, total language and total mathematics. • Achievement post-tests in the spring of the first and the second year • Attitude measures as a pre- and a post-test in the fall of the first year and in the spring of the second year. • Social relations measure. Students were asked to list the names of their friends in the class at approximately the same time they were given the other pre- and post-tests. • For learning disabled students the social relations measures were reanalysed to determine the number of times they were selected as a friend by their non-handicapped peers.
Main findings	After two years, academically handicapped students in co-operative elementary schools had significantly higher achievement in reading vocabulary, reading comprehension, language expression, math computation, and math application in comparison with similar students in comparison schools. There were also better social relations in co-operative elementary schools and handicapped students were more accepted socially by their non-handicapped peers then were similar students in traditional schools with pullout remedial programmes. The results also suggest that gifted students in heterogeneous co-operative learning classes had significantly higher achievement than their peers in enrichment programmes without co-operative learning.

Evaluative commentary	This study did not evaluate all the components of the co-operative learning programme. Instead, it focused on using co-operative learning in a variety of content areas and mainstreaming learning disabled students. Components, such as peer coaching and co-operative planning among teachers, and between teachers and principal, were not specifically addressed. It is impossible to determine the impact of any of these components from the data presented. Similarly, each of the co-operative learning programmes (TAI, CIRC) changed group processes, curricula and reward structures, and the relative effects of parts cannot be disentangled in this study.

Author and title	**Stevens, R.J.** and **Slavin, R.E. (1995b)** Effects of a cooperative learning approach in reading and writing on academically handicapped and nonhandicapped students.
Publication details	*The Elementary School Journal* **95**, 241–62
Language	English
Country of origin	US
Type of research	Quantitative
Methodology	A major goal of this study was to investigate the academic and social outcomes of using CIRC as an approach to mainstreaming academically handicapped students (at least 2 years behind their grade level, e.g. learning disabled, educationally mentally handicapped). The Co-operative Integrated Reading and Composition (CIRC) programme is a co-operative learning approach to teaching elementary reading and language arts. Experimental teachers used the CIRC programme for two years. The CIRC programme consists of three main elements: story-related activities, direct instruction in comprehension strategies, and integrated writing and language arts. Instruction begins with the teacher presenting the new information or strategies through models and explanations. Students receive support during the initial phase of practice. Gradually, the cognitive support is diminished by reducing the guidance from the teacher while allowing the peers to work closely with partners. Students are assigned to heterogeneous ability teams in which they collaborate on structured follow-up activities. The activities are as follows: 1. Partner reading: students read the story silently first, then orally with their partners. 2. Treasure hunts: students are given questions related to the story that focus on understanding what happened in the story. Students are also asked to predict how the characters might solve problems that occurred in the story and to clarify why the characters behaved in a particular way. 3. Words out loud: students practiae new words with their partner. 4. Word meaning: students are asked to write the meaning of new words and to use it in a meaningful sentence. 5. Story retelling: students summarize main events in the story to their partners. 6. Story-related writing: students are given a writing topic related to the theme or events in the story. 7. Quizzes: students are given a comprehension quiz about the story, are asked to write meaningful sentences using new words, and are asked to read the new vocabulary aloud to the teacher. The students complete these quizzes independently. Individual score are used to determine the team score; this connects the success of the group with the success of each group member and motivates group members to help one another. 8. Independent reading: students are asked to read 20 minutes silently each evening. Students are required to complete a book report every two weeks. • Explicit instruction in comprehension strategies. One day each week students receive instruction in reading comprehension strategies such as strategies for identifying main ideas, making inferences, and drawing conclusions about what they have read. • Integrated writing and language arts. Students spend approximately 3 days a week engaged in the steps of the writing process: planning, writing drafts, revising, editing and making a final draft. During each step of the writing process, students consult with their peers. To provide more support for academically handicapped students the special education teacher went into the classroom for about 30 minutes a day. Teachers were at least once every two weeks observed and coached to monitor the programme implementation. In the control schools teachers continued using their traditional methods and curriculum materials. Academically handicapped students received pullout reading instruction in a separate room for 30 minutes a day.

Sample	Subjects were 1,299 students in second through sixth grade in a suburban, working-class school district in Maryland. Experimental and non-experimental schools were matched on socio-economic makeup and were similar in ethnicity and levels of achievement. The overall special education population, including learning-disabled students, in the two groups averaged approximately 12% of the school population.
Method of research	Pre-tests on reading and language arts, post-tests after the first and the second year. Data for academically handicapped students were analysed separately.
Main findings	Results show that CIRC can provide a vehicle for effectively mainstreaming academically handicapped students into regular education classes. After the first year academically handicapped students in CIRC had significantly better achievement on reading vocabulary and reading comprehension than did their counterparts in traditional pullout special education programmes. After the second year, learning disabled students had significantly better performance in reading vocabulary, reading comprehension, and language expression, results that essentially mirror those of all students in CIRC. Authors state that mainstreamed academically handicapped students were helped academically and socially.
Evaluative commentary	The schools in this study served primarily suburban working-class neighbourhoods. The question remains how applicable CIRC is to the urban school districts with much higher proportions of disadvantaged students and many more students reading below grade level.

Appendix B Documents: European literature review – Austria

Author and title	**Burmann, K.** and **Moser, I. (1998)** *Integration im Pinzgau, Ergebnisse einer Befragung zur Integration in den Volks- und Hauptschulen* (Integration in an area of the Federal Province Salzburg: Pinzgau) Results of a questionnaire about inclusive education in primary and secondary schools
Publication details	Copied and distributed by a teacher training institute in Salzburg as a basic handout for teacher training modules concerning integration.Salzburg
Language	German
Country of origin	Austria
Type of research	Quantitative study
Methodology	The authors of the study wanted to explore how satisfied teachers are when they have to teach children with and without disabilities in different integration settings:
Sample	33 children with SEN were included in 17 classes; more than 35 teachers were asked by questionnaires. Most of them responded in a team, some on their own, in fact 18 questionnaires were resent with information.
Method of research	Teachers were asked by questionnaires if they were satisfied with the students' development, with their own situation in class (methods and co-operation) and organizational conditions.

Main findings	• Teachers teach mainly children with learning disabilities, who are sometimes disturbed in their behaviour or children who's mother-tongue is not German, together with students without impairments. • Integration setting (about 4 children with disabilities in one class among others) seems to be the best way to cope with students with behaviour problems, because two teachers are in the class all the time, methods for better communication between pupils are implemented (morning circle, creative means to cope with difficulties...) • Teachers suggest more co-operation with counselling teachers, with parents and their team partners, because the usual monitoring of children with behaviour disorders is not sufficient. • Children with hearing impairments need a very special treatment. Numbers of children in classes have to be reduced; close co-operation between parents and teachers and the local resource centre is more important than in other cases. Support concerning communication is unavoidable (teaching of body language for all children in the class), the use of technical aid is necessary and implementation of modern teaching methods is the basis for inclusion of children with hearing impairments. Teaching in teams: • Methods and experiences for teaching in teams is one of the key factors in order to succeed in including kids with SEN. Teachers describe how important it is to work on personal skills, to be willing and able to solve conflicts together, clear competence must be shared among the partners. • The demands for the special teachers are very challenging. They have to show flexibility, tolerance, skills in communication and organization and their behaviour is also assumed as one of the key elements for successful co-operation. Methods of teaching: • Lessons based on projects, co-operative learning methods, alternative methods like Freinet or Montessori are assumed as a necessity for teaching in inclusion settings. These methods are described as a prerequisite for teaching in teams and monitoring students with disabilities. Co-operation with parents: If parents are willing to co-operate, they have very strong power to support teachers in their preparatory work, in carrying out projects or in implementing new educational developments. If there is a lack of support, especially of the parents whose children are disordered in behaviour, teachers blame the missing positive attitude towards scholastic tasks and it has an impact on success of social integration.
Evaluative commentary	Because of economical reasons it was not possible to evaluate the parents or students view. It would have enriched the outcome of the study. The questions of the questionnaire were a form of guideline; therefore it was not possible to sample the answers. The findings of study are based on the assumptions of teachers and were not evaluated by an external observer. No comparison groups, no outcomes on the pupils' level

Author and Title	**Dür, A.** and **Scheidbach B. (1995) '***Ohne Wenn und Aber', Schulische Integration in Vorarlberg* ('No ifs or buts', inclusive teaching in Voralberg's schools)
Publication details	Diploma (final exam) at University of Innsbruck
Language	German
Country of origin	Austria
Type of research	Quantitative observation
Methodology	Teachers were asked by questionnaires about their attitude and experiences towards their work in inclusive classes. Observation was done by the students of the university
Sample	31 teachers from 29 primary schools and two secondary schools, with inclusive settings 8 part time and full time support by a second teacher 90 students with SEN – 52 children are taught on the basis of the curriculum for 'slow learners', 18 on the basis of the curr. for children with mental disabilities. The others vary according to their abilities.
Main findings	Teaching in teams is a key element, which must be respected in financial and in training aspects in the future. Counselling and training opportunities and supervision are not provided as necessary. More flexibility with the provision of support by hours per child with SEN is a must for the best support of all children and for the work of the teachers without overtaxing The extension of local counselling-services, which support and give advice to teachers concerning questions of mainstreaming, is inevitable. Teachers are ready to give up old-fashioned teachings methods in favour of modern ones step by step, which they estimate positively. Social learning is a logical consequence of inclusive teaching and learning, which is a benefit for all. Students of inclusive classes have the same achievement levels as those from other classes. By the support of a second teacher in class, it is possible to support the individual child's ability and interest. Most of the teachers who answered the questionnaires, expressed their positive attitude towards integration of children with SEN. Their willingness to teach in inclusive settings is evident. Now it is the responsibility of the authorities to give integration in school a chance.
Evaluative commentary	Concerning teaching methods, it would be interesting to know more about the differences between inclusive and 'normal' settings. In this study, the authors made a juxtaposition between classes supported part-time and full-time.

Author and title	**Lughofer, Th. (1996)** *Integration von Kindern mit Verhaltensauffälligkeiten* (Integration of children with behaviour problems)
Publication details	Dissertation at University of Salzburg; not published
Language	German
Country of origin	Austria
Type of research	Quantitative study
Methodology	Lughofer wanted to explore, if children with emotional and behavioural problems feel integrated in their classroom in inclusive settings and in special schools. She used 2 methods: (1) questionnaire (Haeberlin *et al*., 1989) where children were asked if they feel well integrated and (2) organigrammes of the social status of children (Petillion ST 3–7) (internal and external evaluation).
Sample	38 mainstream classes (inclusion/second teacher full-time), 60 mainstream classes (part-time supported) and 12 special classes in schools. The teachers and local authorities were asked for children with behaviour problems. Finally 22 children between 9 and 12 years in mainstream and special schools were chosen (17 children with SEN, 5 children with behaviour problems and learning difficulties) and asked by questionnaires (18 boys and 4 girls).
Method of research	Questionnaire, external and internal evaluation
Main findings	• Children with emotional and behavioural problems are those who cause most problems when they are integrated. • Non-disabled children tend to accept children with Down's syndrome or other disabilities like severe visual or hearing impairments etc. • It seems that in juxtaposition to other forms of handicaps, support of children with emotional and behavioural problems is not enough. • Children in mainstream classes feel more (social and emotional) integrated than in special schools. • In mainstream classes where children with behavioural and emotional disabilities are integrated without any other children with disabilities, self-assessment concerning the grade of social and emotional integration is higher than in other classes (special schools and '*Integrationsklassen*', where more than 3 children are in. • It is very important to say that the conditions for teaching these children in mainstream have to be changed, because the problems are plain to see. • In mainstream schools, where children with all sorts of disabilities are integrated in one class as is usual in Austria, children with emotional and behavioural disabilities are the losers. Teachers can't cope with the variety of demands, although they teach in teams. The author suggests not to sample students with severe handicaps and children with behavioural problems in one class. One should pay attention to avoid a melting pot of children with problems, whether assessed or not. In Austria, funding is pupil bounded. This means that you can't get any additional support when children are not assessed as children with special educational needs. By recommendation of the Ministry of Financial Affairs, the rate of children with SEN should not exceed 3% of all pupils. • It appears that teachers are not prepared to teach children with emotional problems.
Evaluative commentary	Some findings of this study are based on a very small amount of children (22) and therefore not proofed for a wider rate of students. The different sights of integration are very interesting: self-estimation of the pupils and the sight of the teachers and classmates in different settings (special school, inclusion and part time integration). The findings of this study could have an impact on political decisions to offer more additional support for children with emotional and behavioural problems. No information about classroom practice or teaching methods.

Author and Title	**Specht, W. (1993)** *Evaluation der Schulversuche zum gemeinsamen Unterricht behinderter und nichtbehinderter Kinder, Ergebnisse einer bundes weiten Befragung von Lehrerinnen und Lehrern im Schulversuch* (Evaluation of school pilot projects concerning education of disabled and non-disabled children in integration settings, findings of a nation wide study (by questionnaires) of teachers in school pilot projects)
Publication details	Bundesministerium für Unterricht und Kunst, Zentrum für Schulversuche und Schulentwicklung Abt. II, Graz
Language	German
Country of origin	Austria
Type of research	Quantitative study, also some qualitative aspects
Methodology	The author of the study wanted to explore how satisfied teachers and headmasters are when they have to teach children with and without disabilities in different integration settings, in pilot school projects before the law was established 1993. 1. Inclusion: both groups (minimum of 3 handicapped children in one class) are in one classroom, minimum of 2 teachers in a team. 2. Inclusion: '*Stützlehrerklasse*' – only 1 or 2 children with disabilities in one class. A peripatetic teacher supports the children (child) some hours a week. 3. Integration by co-operation: mainstream classes work together with special classes in one school or two types of schools work together. 4. 'Integration' by special support of children with learning or behaviour problems in special schools. The goal is to give children better chances to enhance their learning abilities in a smaller group of children by teaching the same curriculum as in primary schools. After one or two years kids should be able to return to their primary schools without any additional help. Teachers were asked by questionnaires how many disabled children they have to teach for how many lessons and in which way. If the number of pilot projects increase in their schools, how experienced are teachers in teaching children with and without disabilities together; under which conditions do teachers have to teach and how satisfied are they (salary, teaching in teams, pre- and in service training, framework, civil service law and so on); teachers had to estimate the grade of social integration of handicapped students and if teachers are able to meet the demands of children with disabilities. In the end teachers had to estimate if the pilot project succeeded or not and if the outcome of the project justifies the input (effort, money, additional commitments and so on).
Sample	1684 teachers in 406 classes were asked. 788 teachers responded the questionnaires from 332 classes in different setting as described above. Appr. 80 % primary schools, 20 % secondary schools (Hauptschulen)
Method of research	Questionnaires developed by the 'Centre of school pilot projects and school development', worked out and proceeded by Specht and his team.

Main findings	• Full inclusion seems to be the best way to meet the demands of children with disabilities but also positive experiences with the second model: 'part-time support' when children have moderate learning disabilities. • Estimations of teachers depend on whether they work in the pilot project voluntarily. Up to 75% of teachers in inclusion settings were voluntary; approx. 50%. of teachers in other settings. This also has an impact on the degree protagonists feel satisfied with actual working conditions or in co-operation with others. • In inclusion settings it is more the structural effect which appears positive and which are stronger than factors of teachers' attitude. • Teachers who are not volunteers judge the success of integration to be more moderate than volunteers. • Full inclusion seems to be the best prerequisite (setting) for teaching in teams. Team partners feel more harmonic; less conflicts appear than in other settings. • Teachers in inclusion settings feel more restrained than in other models but at the same time they feel more satisfied with the 'new way of teaching'. • Pilot projects which are running under model 2 do not cause many environmental troubles. Education and teaching remains more or less the same; working condition don't change as much as in the first setting. • Inclusion setting (model 1) is the model which is provoking some resistance from other teachers, headmasters or parents, because the structural and teaching conditions have to be changed enormously and have more impact on other classes or teachers than in other settings. • Inclusion setting seems to be the best way to support social relationship between handicapped and non-handicapped children. • Teachers who teach in co-operative models are very critical concerning the provision for children with SEN and the success in meeting their demands. • Basic training and in-service training is estimated very critical. Although most of the teachers feel competent and confident to meet the demands in the school pilot project: • The needs of teachers are very different and is depending on their basic training. Generally, teachers want to be trained in multi level instruction and different teaching methods and they want to enhance their skills and knowledge in co-operation with other teachers in classroom. • The needs differ from province to province. More than half of the questioned teachers think that "Supervision" is useful, but it is not enough offered (for free) by support centres.
Evaluative commentary	For economical reasons (this study was done by a small institute) it was not possible to proceed with further questionnaires or interviews concerning the satisfaction of parents and other persons who are affected by the topic. It was not possible to have a look at the quality of teaching or the outcome of teaching methods. It is 'only' the teachers assumption and feedback which is the criteria of success or failure, satisfaction or disappointment and the author's interpretation of the outcome.

Author and Title	**Wetzel, G., Moser, I., Riedler, H., Brejcha, H.** and **Weiss, S. (1999)** Kinder mit Auffälligkeiten – Studie zu Rahmenbedingungen und Praxis des Unterrichts in Volksschulklassen (Children with problems: study on conditions and practice of education in primary schools)
Publication details	*Erziehung und Unterricht* (journal for education), 672–85
Language	German
Country of origin	Austria
Type of research	Qualitative study, observation, quantitative study
Methodology	The study wants to find answers on following questions: • The number of children with SEN is increasing. Is it more difficult to teach children in primary schools than it was before? Do parents and teachers take full advantage of the Austrian pupil bounded system and the chance to integrate children in mainstream? Does school produce learning disabilities to take full advantage of a second teacher in class? (The more children with SEN in one class, the more hours a week children are supported by an additional teacher.) • Under which conditions and how do teachers in Salzburg and Upper-Austria teach in primary schools, when they declare that one or more children in their classes cause troubles? (different categories were mentioned: visual and hearing impairments, learning difficulties, behavioural and emotional problems, a combination of both very often mentioned by the teachers, speech impairments, and other disabilities or problems.) • Do they use existing resources for Primary schools (teaching methodology, material, additional support before and after school, using network in the community etc.) or do they expect other experts solving their problems? • Are teachers trained to cope with a variety of abilities and disabilities. Do they use modern technology, carry out workshop oriented and differentiated lessons to meet the demands of different children? • Is there a difference in teaching and communication in inclusive setting and other classes?
Sample	Teachers were asked by questionnaires, if there are children in their class who cause problems, and they were asked to list the problems. The team offered some categories like behaviour problems, visual, hearing and speech impairments, learning troubles and so on. More than a hundred papers came back and the team chose those children (classes), who had more than one problem, or other kids with SEN were already in the class (to make sure that it must be more difficult to teach than in a regular class). It was important to get information from different areas, classes in cities as well as in rural areas were chosen. The study was carried out in springtime. At that time none of the children was assessed. In autumn 25 of 44 children (in second and third level) were statemented. A comparison between the both group of children took place in order to find out, which conditions help teachers to keep children in their class without changing the status of the children, although they cause problems. This study was part of a European-wide study (almost the same methodology) therefore Dr Wetzel could use the Austrian database for the comparison between classes with and without integration, part-time or full-time supported by a second teacher.
Method of research	Framework for teacher's interviews, 3 different observation sheets for observation in class: Helmke and Schrader (1996); Observations of activities in school/OAS – Palacios and Lera (1998); Sacers Instruments (School-Age Care Environment Rating Scale).

Main findings	Teachers who are able to structure teaching time very effectively support children with learning deficits. Multi-level instruction is not very common. Approximately less than four hours a week is organized in that teaching method. Alternative ways of teaching are not necessarily better than traditional teaching. It depends very much on the structure of teaching time and the frame in which children can act or react (behave). The more clearly teachers and pupils were aware of what was allowed and not, the less children with learning problems were statemented. Good communication between different groups (children and teachers, children and children) has an impact on learning success. Older teachers 'produce' less children with SEN (for whatever reason). Teachers attend INSET courses twice as much, when they feel a need (severe learning difficulties, children with emotional and behavioural problems in class, hearing impairments...). In comparison to other classes, those with more than 3 children with special needs (8 classes in this study): • are less teacher centralized; • their climate is less approach-oriented; • teaching methods vary more than in other classes; • are more individualizing and support oriented.
Evaluative commentary	For economical reasons it was not possible to assess the children by an external expert, to prove the rate of handicap. Classrooms for observation were chosen because of self-estimation of the teachers concerning children with difficulties (1st questionnaire). The number of children for the juxtaposition – classes with or without children with SEN – is only 44. Therefore it is not possible to judge for a wider group of students and teachers. The sample for the comparison between classes with and without children with SEN is very small (only 8 classes).

Appendix C Documents: European literature review – Denmark

Author and title	**Egelund, N. (1997)** (Professor of Psychology at the Royal Danish School of Educational Studies): *Den modsigelsesfulde specialpædagogik* (The Contradictory Special Education).
Publication details	Copenhagen: *Psykologisk Pædagogisk Rådgivning* **36**(2), 162–70
Language	Danish
Country of origin	Sweden
Type of research	Literature review
Main findings	The author presents the main features of a recent doctor dissertation by Bengt Persson at the University of Gothenburg: 'The Contradictory Special Education'. While special education has been discussed for many years few conclusions have been arrived concerning its nature. In the qualitative part of the study 80 teachers from normal and special education were interviewed. The motivation for special education is that a number of pupils cannot respond to the demands of normal teaching. The level of resources is important, but the distribution of special education seems somewhat haphazard. The demand specified in local plans that all special education must be evaluated regularly is not complied with; only one-third of the teachers found that evaluation took place at all. In the quantitative part, questionnaires were answered by 8.000 pupils in 3rd form and their parents and teachers. Surprisingly few background variables had much significance: 18% from the level of intelligence, 2% from social economical background, and 1% from gender. The conclusions are that two radically different views exist of special education: a relational one that views the system and a categorical one looking at individual differences. The first important step should be to discuss these views and their consequences. Special education should be seen as part of a pattern comprising all of the school system. The goal is to arrive at an acknowledgement of what is needed to deal with the total span of individual pupil differences.

Author and title	**Frey, B. (1997)** (School psychologist in Gentofte): *Udviklingsarbejder og skoleudvikling – set i et specialundervisningsperspektiv* (Development Projects and School Development).
Publication details	Copenhagen: *Psykologisk Pædagogisk Rådgivning* **34**(6), 68–77
Language	Danish
Country of origin	Denmark
Type of research	Development work, innovation
Main findings	In 1991 a report was presented describing the outcomes of 102 developmental projects about special education in Denmark. Among the main results are: normal and special education must be co-ordinated in order for both to have positive effects on the pupils, the development of positive self-evaluation must be the goal of all special education, the relationship between pupil and teacher is of the utmost importance. It is advised that schools initiate developmental projects in order to enhance the positive impact of special education. Such projects should be given all the support possible, should be very well planned, and the role of the head teacher in this process is underlined.

Appendix D Documents: European literature review – Finland

Author and title	**Happonen, H. (1998)** *Fyysisten erityisopetusympäristöjen historiallinen, typologinen ja arvioitu tila Suomessa*.
Publication details	Publications in Education (series), No 40, 255 pp., University of Joensuu.
Language	Finnish
Country of origin	Finland
Type of research	The historical, typological and evaluated state of physical special education environments in Finland. Joensuu

Author and title	**Huhtamäki, S. (1997)** *Omana itsenänsä toisten joukossa. Vanhempien kokemuksia vammaisen lapsen koulukäynnistä yleisopetuksen luokassa*.
Publication details	University of Jyväskylä, Department of Special Education, Research reports No. 61, 77 pp.
Language	Finnish
Country of origin	Finland
Type of research	Being oneself among others: a child with disabilities in a regular education class. Parents' experiences

Author and title	**Jylhä, I. (1998**) *Yhdessä ja erikseen. Harjaantumisoppilaiden ja ala-asteen oppilaiden yhteistoiminnallisten ryhmien muotoutuminen sekä sosiaalisen integraation toteutuminen kuvaamataidon opetuskokeilussa*.
Publication details	FARM Research Publications, No. 72, Helsinki: Finnish Association on Mental Retardation
Language	Finnish
Country of origin	Finland
Type of research	Together and apart. Co-operative skills of special education pupils and primary-school pupils, and experiences and opinions on integrated instruction in visual arts.

Author and title	**Pöyhönen, S. (1997)** *Saako vammainen lapsi ystäviä tavallisella luokalla?*
Publication details	University of Jyväskylä, Department of Special Education, Research reports No. 65, 68 pp.
Language	Finnish
Country of origin	Finland
Type of research	Can a child with disabilities make friends in a regular class?

Author and title	**Ström, K. (1996)** *Lärare, försvarsadvokat, lindansare eller…Speciallärarens syn på sin verksamhet och roll på högstadiet*.
Publication details	Åbo Akademi, Faculty of Education, Department of Special Education, report No. 13, 190 pp., 1 appendix.
Language	Finnish
Country of origin	Finland
Type of research	Teacher, defence counsel, tight-rope dancer or … the special education teacher's view on her work and role in secondary school

Appendix E Documents: European literature review – France

Author and title	**Belmont, B.** et **Verillon, A. (1997)** Intégration scolaire d'enfants handicapés à l'école maternelle : partenariat entre enseignants de l'école ordinaire et professsionnels spécialisés.
Publication details	L'éducation préscolaire [Dossier] *Revue française de pédagogie* **119**, 01-04-97, 15–38.
Language	French
Country of origin	France

Author and title	**Bony A.** et **Seknadje-Askenazi, J.** (eds)/**CNEFASES** (Centre National d'Etudes et de Formation pour l'Adaptation Scolaire et l'Education Specialisee) **(1995)** Actes du Colloque national de 1994: Qu'est-ce qu'aider?
Publication details	*Les Cahiers de Beaumont* **69–70**, 10/11/12 1995, Publications du CNEFEI, Suresnes.
Language	French
Country of origin	France

Author and title	**Bourdon, P. (1999)** Elèves handicapés à l'école de l'intégration à la scolarisation.
Publication details	Marginalisation, intégration – *La nouvelle revue de l'AIS: adaptation intégration scolaires et éducation spécialisée* **8**, 01-10-99, 175–85.
Language	French
Country of origin	France

Author and title	**Collat, M. (1994)** *Je veux être un enfant comme les autres. Aides techniques pour un enfant déficient visuel.*
Publication details	Suresnes, CNEFEI. Cassette vidéo VHS, couleur SECAM, sonore.
Language	French
Country of origin	France

Author and title	**Courteix, M**. et **Gazay-Gonnet, D. (1996)** *De la maternelle au collège*.
Publication details	Suresnes, Editions du Centre National de Suresnes, 1996. Cassette vidéo VHS, couleur SECAM, sonore.
Language	French
Country of origin	France

Author and title	**Delmas, M. (1997)** *Le rôle des enseignants spécialisés itinérants dans le processus d'intégration scolaire.*
Publication details	Mémoire professionnel DDEEAS: Suresnes, CNEFEI
Language	French
Country of origin	France

Author and title	**Dubois, P. (1996)** *La scolarisation en CLIS des enfants déficients auditifs accompagnés par un service de soutien à l'éducation familiale et à l'intégration scolaire: étude réalisée dans le département des Yvelines.*
Publication details	Mémoire professionnel DDEEAS: Suresnes, CNEFEI
Language	French
Country of origin	France

Author and title	**Fontan, V. (1999)** *Enseigner l'anglais à l'école élémentaire à des élèves déficients visuels en intégration.*
Publication details	Mémoire professionnel CAPSAIS, Suresnes, CNEFEI
Language	French
Country of origin	France

Author and title	**Inspection départementale La Rochelle-AIS (1999–2000)** *Des CLIS à caractère thérapeutique*, 3 films de 17 à 21 minutes.
Publication details	Intégration scolaire et partenariat, École Paul Michaud – Chemin du Marais Blanc – 17340 Châtelaillon-Plage
Language	French
Country of origin	France

Author and title	**Lantier, N., Verillon, A.** et **Auble, J-P. (1994)** *Enfants handicapés à l'école: des instituteurs parlent de leurs pratiques.*
Publication details	Paris, INRP-L'Harmattan
Language	French
Country of origin	France

Author and title	**Le Tessier, D. (1996)** *Le projet individualisé du jeune sourd: de l'éducation précoce à l'insertion sociale.*
Publication details	Mémoire professionnel DDEEAS: Suresnes, CNEFEI
Language	French
Country of origin	France

Author and title	**Meljac, C.** et **Barbot, F. de (1990)** L'intégration scolaire des enfants infirmes moteurs cérébraux: mythe ou réalité?
Publication details	*Handicaps et inadaptations, Les cahiers du CTNERHI* **49**, Paris, 01-03-90, 33–49.
Language	French
Country of origin	France

Author and title	**Morel, D.** et **Lutaud, L. (1999)** *Un enfant sourd dans votre classe*.
Publication details	Lyon, CRDP. Cassette vidéo VHS 28mn, couleur SECAM, sonore.
Language	French
Country of origin	France

Author and title	**Philip, C. (1994)** *C'est mieux qu'ils soient dans notre école.*
Publication details	Suresnes, Editions du Centre national de Suresnes. Cassette vidéo VHS, couleur PAL, sonore.
Language	French
Country of origin	France

Author and title	**Publication collective (1997)** Handicap et intégration scolaire. [Dossier]
Publication details	*Les Publications de Montlignon* **29**, 01-06-97, 6–107.
Language	French
Country of origin	France

Author and title	**Reveillere, C., Boucharef, W., Cunin, J-A.** *et al*. **(1998)** L'intégration scolaire en milieu ordinaire d'élèves atteints d'une maladie neuromusculaire.
Publication details	*Psychologie et éducation* **32**, Paris, 01-03-98, 23–41.
Language	French
Country of origin	France

Author and title	**Thouroude, L. (1997)** L'intégration d'enfants handicapés à l'école maternelle: quelle participation aux activités proposées?
Publication details	*Sauvegarde de l'enfance* **4–5**, 01-12-97, 171–82.
Language	French
Country of origin	France

Appendix F Documents: European literature review – Germany

Author and title	**Degen, S. (1999)** *Integration im Englischunterricht* (Joint Instruction in English Lessons)
Publication details	Luchterhand: Neuwied
Language	German
Country of origin	Germany
Type of research	Analysis of specific methods to integrate slow learners with special needs in the English (as a second language) instruction. Analysis of consequences of specific handicaps in the context of learning English as a foreign language.
Methodology	Description of experiences in several inclusive classes in Hamburg and Berlin. Transfer and adaptation of general accepted didactic theories to an instruction with several levels of performance at the same time, with several groups and support by – part of the time – two teachers (one expert in English, one expert in educating slow learning students with SEN). Size of classes: 20–24.
Sample	See above
Method of research	Improving general educational theories and theories in English didactics in order to realize different educational targets in foreign language education. Evaluation of the suitability of commonly used English-lesson-books in the inclusive-class-context.
Main findings	Necessity of incorporation of everyday life aspects from outside school (family, friends, extracurricular activities) into instruction; Possibility to teach children with the most different abilities together in one context by the means of differentiating levels and tasks, the way work is organized and presented, time-scheduling (tasks for a whole week, not only for one hour), groups, interests. Importance of emphasizing natural speaking situations, but also of computer and internet. Difficult to release this programme with only one teacher but not impossible when situations of self-control are used.
Evaluative commentary	There is no empirical examination, but the first systematically and concrete German written book about joint teaching of slow learners and children without SEN in English subject.

Author and title	**Dumke, D.** (ed.) **(1991)** *Integrativer Unterricht* (Inclusive Instruction)
Publication details	Deutscher Studien Verlag: Weinheim, 248 pp.
Language	German
Country of origin	Germany
Type of research	Quantitative and qualitative study; longitudinal oberservations and analysis of 10 Primary Schools in Bonn, Nordrhein-Westfalen, over 4 Years (1986–90). Inclusive education is organized for 1–2 nearby living children with SEN, together with 18–28 pupils without disability. Team teaching only in some hours by week because of low number of disabled children. Every type of special need, mainly slow learners, behaviour disorder, impaired speech, but also some mentally retarded, hearing impaired and physically handicapped children (altogether 54 students with SEN). In this part of Bonn all primary schools are inclusive schools.
Methodology	Systematically observation of instruction and social relations within the lessons by psychologists. Subjects: German, Maths, Art/Music, Free Work, Science. Additional reports of inclusive practice by teachers.
Sample	Basis of quantitative data: 10 classes with inclusions of disabled students and parallel 10 classes without disabled students from the same school (2nd–4th grade); 30 lessons by every class.
Method of research	See above
Main findings	The comparison between instruction in classes with and without inclusion (integration) shows the following significant effects: Integration classes have more time for free work (21% vs. 3%), more student-oriented material (self-learning material) (62% vs. 52%), more different academic levels within the lessons (28% vs. 6%), more single work situations (35% vs. 27%, especially in Maths), less instruction for the whole class (43% vs. 57%), more other grouping situations (21% vs. 16%), more self-controlled learning situations (46% vs. 35%). In these classes the interaction between students is more frequent (20% vs. 11%), the interaction between teacher and all students at the same time less (55% vs. 72%). There is no interaction difference between children with SEN and without, revealing good integration of children with special needs on the level of learning and group process. Following additional significant effects were detected: in classes with integration the emotional expression and student–student help is more frequent. More individual help of (all) students is reported and more emotional acceptance by teachers. The continuity of work is better in integration classes. Children with SEN are more expressive than children without SEN, and they have more social contacts than non-disabled children in classes without integration, and they observe and listen more to their classmates than the non-handicapped in the parallel classes.
Evaluative commentary	A very careful empirical study upon what really works in inclusive education in Germany, with a broad empirical basis and a high level of methodological standards.

Author and title	**Heimlich, U. (1999) '***Gemeinsam lernen in Projekten' – Bausteine für eine integrationsfähige Schule* (Joint learning within projects – elements for an integration capable school)
Publication details	Julius Klinkardt, Heilbrunn, 240 pp.
Language	German
Country of origin	Germany
Type of research	As a result of a broad evaluation about working in projects (*Projektunterricht*) about 400 files since 1990
Methodology	Evaluation of the framework of reorientation of special needs education and in the process the innovation is 1. '*Projektunterricht*' in the framework of the didactic of integration. The theory of learning methods. 2. Experiences with '*Projektunterricht*' in integration-classes; collection of partly unpublished reports of experience. 3. Ways of implementing '*Projektunterricht*' into classroom practice. 4. Guidelines for teacher training in this area. As annex the evaluation of the database of literature PROFI (Learning within Projects in integration and special classes)
Sample	Learning in heterogeneous learning groups with all kind of disabilities in integration-classes in mainstream school and in special classes.
Method of research	See above
Main findings	Today pupils manage with new learning needs appropriate to the school, which themselves differentiate further on account of varied life situations. Learning to march in step corresponds less and less to this social change. Therefore, instruction concepts which allow both individual and common learning experiences need to be taught. One of those concepts is the '*Projektunterricht*'. A central role comes in project instruction, especially in integration classes and in common instruction. Projects offer learning experiences which refer themselves at the same time to a common learning subject and to individual learning assumptions. Via instruction, project learning offers the basis for the organizational evolution for an integration capable school.
Evaluative commentary	Organization of project instruction contains numerous practice examples of everyday life with close instruction projects in the book. A bibliography gives further projects from different organizations and also different learning fields. This is a practice-orientated report which will be helpful for teacher's preparation, planning and organization of education in classroom practice.

Author and title	**Heyer, P.** *et al.* (eds) **(1993)** *Zehn Jahre wohnortnahe Integration. Behinderte und nichtbehinderte Kinder gemeinsam an ihrer Grundschule* (Ten years of local bounded mainstreaming education. Disabled and non-disabled children together in their primary school)
Publication details	Arbeitskreis Grundschule/Der Grundschulverband: Frankfurt/M. (2nd rev. edn, 1994)
Language	German
Country of origin	Germany
Type of research	Reports of teachers about own practice and experiences in inclusive education in the first German school with integration in all classes since 1982 (frequency at the beginning 18 students without, two students with SEN of different disabilities; today 20 + 3; in this school a two-teacher-system (12h a week of a special teacher) is usual. Several subjects like music, English, sports/motion, theatre, writing and reading are discussed.
Sample	Reports from all (18) classes (first to sixth form), collected ten years after the beginning of mainstreaming instruction.
Main findings	The reports emphasize the importance of individualizing the goals within every subject, and to link cognitive, emotional, social and physical dimensions of learning (in social contexts). It is reported that at the same time it is necessary to arrange clear social rules in the class (important especially for mentally retarded children and for children with severe behaviour problems).
Evaluative commentary	Because of many concrete examples from different subjects and the reflection of ten years of mainstreaming practice this book has become very popular and is being used by many primary teachers who are beginning with inclusive education in school and teacher students.

Author and title	**Heyer, P. (1998)** Bausteine einer integrativen Didaktik für die Grundschule (Components of a Integrative Didactic for the Primary School)
Publication details	In M. Rosenberger (ed.), *Schule ohne Aussonderung* (School without segregation) Luchterhand: Neuwied, pp. 89–102
Language	German
Country of origin	Germany
Type of research	Essay on the basis of long-term qualitative and quantitative approach in many mainstreaming schools and classes in Berlin and Brandenburg for more than 30 years.
Main findings	Integrative didactic do not exclude children with low academic performance. Therefore a positive attitude towards differences of culture, gender, performance and physical abilities of all people inside the classroom and inside school – also staff and headmaster – is important. Secondly, classroom and school building and school grounds have to allow temporary withdrawal. Thirdly, individualization of targets and situations of common learning in the group are both important for children with SEN and others. Fourthly, the acceptance of faults (academic faults and behaviour faults) is a basis for strengthen the learning motivation of children with difficult family backgrounds and low academic levels.
Evaluative commentary	Good orientation for classroom practice, based on the classroom practice observations in many German mainstreaming classes.

Author and title	**Jaumann, O.** and **Riedinger, W. (1996)** *Integrativer Unterricht in der Grundschule* (Inclusive Education in the Primary School)
Publication details	Diesterweg: Frankfurt/M, 200 pp.
Language	German
Country of origin	Germany
Type of research	Report on classroom practice of integration in mainstream classes with children of different disabilities
Methodology	Description of specific 'integrative' methods to teach and to integrate children with SEN with different disabilities in a normal school; case studies; evaluation by discussion with other colleagues before publication was realized. The concept is oriented towards Montessori, Humanistic Psychology and Motopedagogic teaching approaches.
Sample	Report of a primary teacher and a special education teacher, co-operating in primary classes in Bielefeld, Nordrhein-Westfalen, over 14 years.
Method of research	Inclusive education needs team teaching, co-operation with parents (parents of students with and without SEN), individualized weekly plans for every student and the regular change between teacher instruction for all students together, individualized self-learning situations and group work (projects).
Main findings	Very readable. The authors demonstrate how to handle with ordinary problems in inclusive education like co-operation with difficult parents (and students), to be under time pressure, obligation to give goals. Good help for mainstream teachers.
Evaluative commentary	Report of a primary teacher and a special education teacher, co-operating in primary classes in Bielefeld, Nordrhein-Westfalen, over 14 years.

Author and title	**Muth, J. (1991)** *Tines Odyssee zur Grundschule. Behinderte Kinder im allgemeinen Unterricht*. (Tina's Odyssey in Primary School. Handicapped Children in Regular Instruction)
Publication details	Neue Deutsche Schule: Essen, 98 pp.
Language	German
Country of origin	Germany
Type of research	Observation integration in mainstreaming classes
Methodology	Observation by two researchers (one man, one woman) in six schools (five primary schools, one comprehensive school), always accompanying one child with SEN. Search for effective pedagogical forms of instruction and support.
Sample	Six children with SEN (mentally retarded children) ('*geistig behinderte Kinder*')
Method of research	Observation of several days of one child with SEN; all the lessons are written down in minute observation.
Main findings	To develop individual learning motivation, it is effective to start from a very individualized level of demand. Integration of mentally retarded children needs a two-teacher system. Therefore it is more effective and more economical to have two or three children with SEN (different impairments) in the class.
Evaluative commentary	The inclusion of severe mentally retarded children is possible and effective also in terms of academic goals, when individualization of school targets for every student with SEN is realized. At the same time it is necessary that the learning process of other students is connected with the learning process of the SEN-children. A very effective method is to put the mentally retarded children in a position of decision for small learning steps or specific social situations of the whole class (e.g. breaks, exercises, singing and playing situations).

Author and title	**Preuss-Lausitz, U. (1998)** Integration und Toleranz. Erfahrungen von Kindern innerhalb und außerhalb von Integrationsklassen (Inclusion and tolerance: experiences of children inside and outside of integration settings)
Publication details	In Peter Heyer *et al.*, *Behinderte sind doch Kinder wie wir!* (Disabled Children are children like us). Wissenschaft und Technik: Berlin, pp. 171–204
Language	German
Country of origin	Germany
Type of research	Empirical study
Methodology	Quantitative analysis of experiences, attitudes and social relations of students in integration and non-integration settings classes (and interviews with parents/teachers of integration in mainstream classes)
Sample	About 600 students (3rd–6th form) from 30 classes in 16 schools in Eastgerman Brandenburg, 16 classes with SEN-children (all disabilities without mentally retarded children), 14 classes without. 43 children with SEN. Class frequency: average 21, two children with SEN, 2–5h weekly in two-teacher system. Parents: 252 parents of 15 classes; Teachers: 63 teachers from 50 mainstreaming classes.
Method of research	Questionnaire; sociometric measurement; feedback to the teachers of the classes by giving feedback from the sociometric results one week later, the general results before publication.
Main findings	In all classes – integration or not – a good acceptance of inclusion is reported; in integration settings there is in general a significantly better social atmosphere; children with SEN have a good school motivation and teacher acceptance; also a good social integration in classes and in afternoon friendships (no differences between boys and girls). Positive attitudes of parents are reported, even those who were anxious at the beginning of integration. High satisfaction by teachers in classes with integration.
Evaluative commentary	There is no sign that students with SEN are socially isolated and suffering even when they have poor academic performances.

Author and title	**Projektgruppe Integrationsversuch (**ed.) **(1989)** *Das Fläming-Modell. Gemeinsamer Unterricht für behinderte und nichtbehinderte Kinder an der Grundschule* (The Fläming-Model. Joint Instruction for Disabled and non Disabled Children in the Primary School)
Publication details	Beltz: Weinheim und Basel, 358 pp.
Language	German
Country of origin	Germany
Type of research	Qualitative and quantitative report about the organization, practice and research results of the first public German school with integration in mainstream classes in one of three parallel classes (1st–6th grade) (meanwhile two of three parallel classes). The 'Fläming-Model': 10 non-disabled students in one class and five children with SEN of different types, two teachers all the time. The school is situated in a social mixed Berlin district. Very active parents at the beginning. Report of about 10 years of practice and research by teachers, social scientists, parents and local administration people.
Methodology	Systematically observations of instruction by teams of social scientists over 8 years; interviews with parents, teachers and students; sociometric tests; performance tests.
Sample	See above
Main findings	The academic results are in part better than in non-integrative parallel classes, especially in speaking and writing. The report describes good integration on social level in the classes and also in the afternoon (common after-school care centre). The methods of instruction are developed as a mix of free work, different weekly plans, common learning situations, especially at the beginning and at the end of the morning, and special programmes for some children with special needs (with impaired speech and perceptual disorder and problems with physical and motor problems). Parents are very satisfied, also the achievement-oriented parents of non-handicapped children. High acceptance in the local district and in the 80th and 90th, a shining example for others, planning to start integration in mainstream schools in Berlin and other municipalities.
Evaluative commentary	The very popular report is a good written orientation for beginners in joint instruction because of many concrete examples of how to deal with challenges, but also for parents and administrators.

Author and title	**Schöler, J. (1996)** *Methodisch-Didaktische Aspekte integrativen Unterrichts* (Methods and Didactical Aspects of Inclusive Instruction)
Publication details	Fern Universität Hagen (ed.) (Course for distance learning from Distance Learning University Hagen, NR. 000990450), 174 pp. Parts also published in J. Schöler (1999) *Integrative Schule–Integrativer Unterricht* (Inclusive school-inclusive education), Neuwied: Luchterhand
Language	German
Country of origin	Germany
Type of research	Analysis of instruction by sitting in (*hospitate*) and observing over several years, especially from hearing impaired and vision impaired children in mainstreaming classes. Qualitative approach
Methodology	Observation and biographical reports of individual students with SEN from the first school day over more than 10 years. Summary of the didactical aspects.
Sample	46 students, all types of special needs, incl. 1 blind, 1 severe hearing impaired, 1 deaf, 1 severe vision impaired student. In most of the classes 1 child with SEN in normal-sized classes (2 part- time teachers).
Method of research	Long-term follow-up studies with observation and video-supported analyses of interaction and learning processes.
Main findings	It is stressed that the co-operation between the special teacher and mainstream teacher is necessary, and also with the therapy staff and the parents. Special results for inclusive education of hearing-impaired children are: keep eye-contact with the student, use face-to-face-instruction; use pictograms; use partner work; use self-control materials; use music also for language and science instruction; use motion plays; develop sound-absorbing rooms. Special results for vision-impaired children are: important is a good place in the room to co-operate not only with teachers but with the other students; use marks in classroom and in school; use PCs and special reading machines; introduce training of elaborated speaking for all children. Two teachers throughout the instruction time are useful but not necessary when materials are combined with self-control tasks. Consultation between regular teachers and special teachers at least every month is necessary.
Evaluative commentary	Useful instruction in the reality of inclusive education of children with special disabilities under 'normal' conditions.

Author and title	**Wocken, H. (1998)** Gemeinsame Lernsituationen (Common learning situations). Eine Skizze zur Theorie des gemeinsamen Unterrichts. (Elements of a theory of the inclusive instruction)
Publication details	In A. Hildeschmidt and I. Schnell (eds), *Integrationspädagogik. Auf dem Weg zu einer Schule für alle*. Juventa: Weinheim und München, pp. 37–52
Language	German
Country of origin	Germany
Type of research	Theoretical discussion of the common situations of inclusive education (critical discussion of the inclusive didactic theory of Georg Feuser)
Main findings	Inclusive instruction has more possibilities than only 'learning differently but the same subject' (Feuser): Learning differently and different subjects, but in the same room, the same group, the same time ('coexistent learning situations'). Secondly, 'communicative learning situations', which means communicating without precise target (pure communication). Thirdly, 'subsidiary learning situations', which means helping the other but continuing own work. Fourthly, 'co-operative learning situations', which means to have common goals and the other (child with SEN or not) is necessary to reach the common target. All four types of common learning situations are as good as the other. They are the basis of mainstreaming didactic work.
Evaluative commentary	A systematic interpretation of the reality in inclusive classroom situations. Pluralistic theory (in opposition to the theory of Feuser who only accepts common learning with the same subject).

Appendix G Documents: European literature review – Greece

Author and title	**Spetsiotis, I. (1997)** School Counselor in Special Needs Education *Members of the Working Group*: Androniki Exarchou, School Councillor in Pre-Primary Education; Marilena Sougioultzoglou, Psychologist; Vassilis Economou, Teacher, Head Teacher in a school for deaf
Language	Greek
Country of origin	Greece
Type of research	Qualitative
Methodology	The special class (examined here) teaching is held in one of the 3 classrooms of the mainstream pre-primary school. The school holds 40 students in total, including pupils with special needs. At the beginning of the school year parents were informed of the running and the objectives of this special class within the mainstream school and they approved of it. Teachers explained to them that the aim of the inclusive education was to help children with adapting difficulties and skill development problems to be included in pre-primary education. The programme includes 3 components: 1. Parent involvement: parents were interviewed on providing information as regards their children's behaviour within the family as well as the nearest social environment. Information describing their children's patient case history; their interests and activities at home was recorded. 2. MEMPHIS project: children's abilities have been recorded in various fields of development and their profile of improvement has been designed. 3. Test Gessel and Goodenough, on copying objects and human figures, which reflect the intelligence rate and may be used in the classroom by the teacher. We should not forget that no form of test is regarded as panacea. It is regarded though as a reference point for the teacher so as to form the first picture of the child's development. Assessment is realized on a regular basis so as to re-examine and revise the activities and aims of teaching.
Sample	A total of 5 students: • a girl with speech defect development and serious adaptation problems; • a boy with language impairment (polymorphous dyslalia) (these 2 children were recommended by a medico-pedagogical centre); • a boy with behaviour problems; • a girl with speech impairment; • a boy with retarded behaviour development and disturbance.
Method of research	Research has been based on the medico-pedagogical committee's evaluation for the child according to the Law on Special Education.
Main findings	The above-mentioned programme of inclusion met the needs of the children towards their development. Through inclusive education the children had equal chances in education and they were given the chance to participate in all forms of activities and be stimulated by their teachers. The availability of their own classroom, the use of the relevant pedagogical material and the continuous attention of the teacher helped the children to progress in view of their development rate/stage. Good co-operation between teachers of all pre-school classes played a fundamental role towards carrying out this programme and resulted in the smooth adaptation of children not only to the pre-school programme but also to the needs of the new school year. It is considered that the programme could be more effective under much better conditions: more space, ideal number of students per class and mostly more pre-school teachers specialized in Special Needs Education, who need to co-operate with the specialized school staff.

Evaluative commentary	Initial assessment was carried out based on continuous observation in the classroom. Various aspects were examined and recorded, such as: children's general attitude, their social status, their interests as well as their game and activity participation throughout the programme. Detecting the children's capabilities and their level of development has also been attempted, in order to focus on individual difficulties and adjust the programme to their needs.

Appendix H Documents: European literature review – Ireland

Author and title	**Corcoran, B. (1995)** *The Integration of Children with Disabilities: A Study of Integration Policies and Practices in a Sample of Dublin Primary Schools*
Publication details	Unpublished MEd. Thesis, Maynooth College
Language	English
Country of origin	Ireland
Type of research	Quantitative; self-administered questionnaire.
Methodology	The study set out to discover (a) the number of pupils with physical and/or mental/learning disabilities who have been integrated into ordinary primary schools in the Dublin City North area and (b) to examine the practical implications of integration for the schools involved, i.e. the policies and practices in these schools.
Sample	Questionnaires were completed by principal teachers and class teachers in relation to 42 children with a variety of disabilities in 28 schools; 57% of the children were physically disabled; the most prevalent disability was cerebral palsy; 11% had a hearing impairment; 11% has a mild general learning disability; 19% had Down's syndrome; 2% (one child) were emotionally disturbed; 67% of the schools had over 300 students; 36% had more than 15 teachers on staff; all but one of the schools had a full-time or part-time learning support teacher.
Method of research	Questionnaire completed by principals and class teachers.
Main findings	Very few parents were involved at classroom level; 68% of schools did not have a statement of policy on integration in their School Plan; 53% of teachers had devised IEPs in respect of the students with SEN in their classes; 97% of teachers did not have professional training in teaching students with SEN; 16% of schools had been provided with specialized equipment/resources/materials. On average, schools had the support of the Visiting Teacher Service for one hour per week; 47% of the SEN students did not have access to the services of professionals such as psychologists, physiotherapists, occupational therapists, speech and language therapists.
Evaluative commentary	Small sample; difficult to generalize from its findings. Highlights important structural, systems and resource issues in Ireland.

Author and title	**Kennedy, B.M. (1994)** *The Integration of Children with a Mental Handicap into Mainstream Schools*
Publication details	Unpublished MEd. Thesis, Trinity College, Dublin
Language	English
Country of origin	Ireland
Type of research	Literature review; quantitative
Methodology	Parents, class teachers and support teachers were interviewed and completed questionnaires in relation to the integration of children with Down's syndrome in ordinary primary schools.
Sample	15 children with Down's syndrome; age range 6–14, all placed in ordinary classes in their local primary schools; 15 sets of parents, 15 class teachers; 4 support teachers. Size of school ranged from 2 teacher schools in rural areas to large town schools. Pupils–teacher ratio from 17 to 37 (average 30). All but two schools co-ed.
Main findings	Facilitating factors in the integration process were: access to information for class teachers about learning styles of children with Down's syndrome and on appropriate teaching methods; professional contact between teachers within schools and between schools; single level classes only, not multi-level; additional funding for children with Down's syndrome; access to services of support teachers and classroom assistants; lower pupil teacher ratio in classes which contained children with Down's syndrome; needs for IEPs; need for parental support and active involvement; need for formal consultation between all parties before child is enrolled; need for regular formal meeting at intervals; need for formal system of communication between school and home; peer tutoring and peer support and acceptance.
Evaluative commentary	Difficult to generalize about pupil progress and adjustment to mainstream school from a small sample. It focused on children with Down's syndrome only. There is a lack of quantifiable data in the study. However, it highlights the need for further quantitative and qualitative research and towards the need for comparative research between children with SEN in ordinary classes in mainstream schools and those in special schools and special classes.

Author and title	**O'Brien, M. (1997)** *Children with Cerebral Palsy and Spina Bifida in Regular Primary Classes: An Investigation*
Publication details	Unpublished MA Thesis in Educational Psychology, University College, Dublin
Language	English
Country of origin	Ireland
Type of research	Descriptive, qualitative
Methodology	The overall aim of the research was to provide a comprehensive picture of the child's disability, functioning and inclusion in the class group; the adequacy of resources both physical and educational in place to meet the child's needs; the adequacy of the preparation of the environment, and other children in the class group. The research sought to ascertain the teacher's attitude to the appropriateness of the child's integration, the adequacy of information and support services available; and the school's own internal response to meeting the child's educational needs and the benefits, if any, to peers.
Sample	There were 63 children in the sample, 40 in the countrywide group (20 boys, 20 girls) and 23 (15 boys, 8 girls) in the greater Dublin sample. 36 children had cerebral palsy, 22 had spina bifida and 5 had spina bifida and hydrocephalus. The age range of the children in the greater Dublin area was 6–13.5 years and 4–14.5 years in the country area.
Method of research	Two groups of teachers were identified. Group 1 consisted of teachers in schools in the greater Dublin area in which former clients or pupils of Cerebral Palsy Ireland (CPI) or of the Central Remedial Clinic (CRC) might be enrolled. These organizations provide a range of support services for children with physical disabilities in the greater Dublin area. Group 2 comprised teachers of children with cerebral palsy or spina bifida in ordinary primary schools outside the Dublin area. This group was accessed through an advertisement in the in-house journal of the primary teachers' union. Group 1: A questionnaire was distributed to 113 schools identified by the CRC as having or having had a former client/pupil enrolled. Of the 65 schools that responded, 23 returned a usable response. Group 2: The same questionnaire was distributed to 46 schools that responded to the advertisement . Of the 40 responses received, all were usable. The questionnaire consisted of 110 items, divided into sections A, B, C, D. Sections A (58 items) and D (7 items) related to the child's physical, educational and social integration, including the child's participation in all school activities. Section B related to the teachers' attitudes, experiences and opinions of the integration process. Section C related to school organization, support within the school as well as to modifications to and within the school.
Main findings	The severity of disability in the area of self-care, mobility, fine-motor skills and speech was substantially more marked in the countrywide group children than in the Dublin area group. Inconsistency in the supply of care staff was a problem for a substantial number of children in the countrywide group. The proportion of children rated as having average or above average intelligence, and reported to be making satisfactory academic progress relative to peers, was substantially greater in the Dublin area group than in the country. Teachers in the countrywide group considered that the disabled group needed more specialized help than the school was able to provide. The vast majority of teachers agreed that integration was the best option for their pupils. Teachers believe that the of the Department of Education and Science to integration is unplanned, under resourced and unsupported. There is a call for a reduction of numbers in classes that contain disabled pupils. There is a need for support from psychologists, inspectors, resource and learning support teachers. There is a need for better access to therapy services and to ICT.

Evaluative commentary	This is a limited study; its findings can't be generalized to the total population of children with cerebral palsy and spina bifida. It does highlight the need for pilot studies on classroom organization, teaching approaches and methodologies and the effective use of the services of classroom assistants. Also the need for comparative research into special school provision mainstream provision for children with physical disabilities.

Appendix I Documents: European literature review – Luxembourg

Author and title	**Chapellier J-L. (1999)** *Evaluation de la pratique d'intégration scolaire au Grand-Duché de Luxembourg: points de vue, constats, recommendations* (Evaluation of school integration practice in luxemburg: viewpoints, statements, recommendations – final report)
Publication details	May, University of Mons-Hainaut
Language	French
Country of origin	Luxembourg
Type of research	Evaluation
Methodology	1. Individual or collective interview 2. Questionnaire Although G. De Landsheerre (1976) said that enquiry through questionnaires is an imperfect method, this technique however presents undeniable interest. It allows the collection in a short time of a large number of facts and themes. It provides credible information and allows rich and varied statistical treatments. It allows seizing the present and gives a good overview of the situation.
Sample	• Professionals concerned by integration • Parents of disabled children • Teachers • Inspectors • Director of the 'Service Ré-Educatif Ambulatoire (SREA)' • Co-ordinators of the different sectors of the SREA • Professionals of the SREA, of different institutions and services of the Department of Special Education • Different members of the 'Commission Médico-Psycho-Pédagogique Nationale (CMPPN)'
Method of research	This research involves two kinds of approaches. The first: qualitative based on individual or collective interviews, from which viewpoints are extracted and on numerous visits, meetings and encounters, which allow statements to be drawn up. The second approach – quantitative – is based on the classical technique of questionnaires.
Main findings	At the end of this work, recommendations are made concerning: 1. the SREA (Service Ré-Educatif Ambulatoire) 2. the National Commission (CMPPN) 3. the schools 4. the Department of Special Education. You can find more information about these recommendations in the research itself.
Evaluative commentary	For a large number of professionals, integration is a daily reality. For most of them, integration is a positive experience. However some teachers refuse to integrate a child because: ▪ they feel incompetent in this field; ▪ they don't want another professional in their classroom. Some teachers require more information, practical advice and the participation of the parents. Educators, psychologists and pedagogues are more favourable to integration than teachers.

Author and title	**Pull, J. (1998)** L'Intégration psycho-socio-pédagogique en classe scolaire ordinaire de l'élève affecté d'un handicap (Psycho-socio-educational integration of handicapped pupils in ordinary school classes)
Publication details	September
Language	French
Country of origin	Luxembourg
Type of research	• Semi-directive interview between 4 and 6 hours for each expert. • Each expert had to answer a certain number of questions. • This kind of interview forces the interviewer to the observation of non-directive attitudes and the employment of reformulation techniques.
Methodology	The intention of the interviewer is to explore the knowledge, motivations, positions, opinions, attitudes and results of the enquiries of the experts. At the beginning, the same questions are asked to each expert: this will give the opportunity to compare the different approaches of the experts. The aim of the interviewer was the reformation and the change of the actual school system in the sense of a psycho-socio-pedagogical integration of SEN pupils in mainstream classes.
Sample	Population: experts working in the field of integrative education for disabled children.
Method of research	Organization of meetings, visits and interviews with experts in this field, university professors, investigators and practicianers from Belgium, France, Germany, Switzerland, Canada, Spain, Netherlands, Sweden and Luxembourg.
Main findings	In the field of school integration, the interviewer got to know a lot of positions and concepts from the different experts. In Luxembourg, teachers of mainstream primary school and some members of the team of specialized institutions have a reserved attitude towards school integration. A lot of people talk about integration, but don't mean the same thing. In spite of concrete projects of integration, problems, contradictions and conflicts still remain. It is impossible to realize a change by forcing it or through prescription.
Evaluative commentary	The experts have confirmed that in the field of school integration, a lot of progress has been achieved during the last 20 and especially the last 10 years. Nearly each European country has advanced legislation in school integration. In Luxembourg, it is important that pre-primary and primary schools don't discharge their responsibility towards disabled children.

Appendix J Documents: European literature review – The Netherlands

Author and title	**Guldemond, H. (1994)** *Van de kikker en de vijver: groepseffecten op individuele leerprestaties*
Publication details	Leuven/ Apeldoorn: Garant
Language	Dutch, summary in English
Country of origin	The Netherlands
Methodology	The study focuses on the impact of social context on individual behaviour. The classroom has, in terms of a reference group, a certain impact on the behaviour and attitudes of students. It has two major functions: a comparative function (a standard of comparison against which the students can evaluate himself/herself), and a normative function (the group rewards or punishes individuals for conformity or deviant behaviour). The main question in this study is to what extent contextual effects at classroom level are affected by these two types of reference processes and whether teachers can affect classroom reference processes through grouping procedures.
Sample	3648 students from 186 classes (grade 8, age 11/12) in 176 schools participated in this research.
Method of research	Data were collected on intelligence, mathematical achievement, gender, social background and ethnicity. Students were asked to rate their classmates in relation to two questions, in order to gain insight into sociometric information on classroom reference processes, and into the social-emotional structure of the class.
Main findings	Findings suggest that both functions of the reference group have a substantive effect on individual achievement. Teachers can affect the reference processes through grouping procedures. Within ability grouping, the class as a whole no longer serves as a reference group, but rather the ability group to which the pupil belongs. Particularly for low ability groups this has a strong disadvantage. When compared to low ability students in heterogeneous groups, their achievement is far behind.

Author and title	**Houtveen, A.A.M., Booy, N., Jong, R. de** and **Grift, W. van de (1997)** *Effecten van adaptief onderwijs, evaluatie van het landelijk project schoolverbetering*
Publication details	Alphen aan de Rijn: Samson H.D. Tjeenk Willink
Language	Dutch
Country of origin	The Netherlands
Methodology	The purpose of this school improvement project was to implement adaptive education through a coaching programme. One of the goals of adaptive education is to integrate students with special needs and students at-risk in general education schools. The first part of the study focuses on the question whether the coaching programme was effective; the second part focuses on the question whether technical reading achievements in grade 3 (age 7/8) were improved through the implementation of adaptive education. Experts from school support centres supported the participating schools. The coaching programme consisted of meetings with all participating schools, meetings at separate participating schools and class consultations. To determine whether the working methods could be called adaptive after the programme, 4 variables were studied: • working according to a plan: students are monitored through tests, the content of (extra) instruction is based on test results, and all activities are registered in a planning document (this is a cyclic process); • efficient use of learning – and instruction time to increase 'time on task'; • direct instruction; • phonetic synthesis. To answer the second question, students were tested on reading skills and reading attitude.
Sample	The sample in the first part of the study consisted of 12 experimental schools and a control group of 11 schools. In the second part, 456 3rd grade students participated (319 students in the experimental group, 137 students in the control group).
Method of research	In the first part, a 'control group design' with pre-test and several post-tests was chosen. To answer the second question, a control group design with proxy pre-test measures was used. Students were tested on reading skills and reading attitude.
Main findings	The coaching by the experts of school support centres had a positive effect on adaptive education. A year after the project, the effects had remained and in some cases even slightly grown. The second part of the study shows that adaptive education had a significant effect on reading skills and reading attitude of 4th grade students. Unfortunately, this learning gain had disappeared a year after the project.
Evaluative commentary	Results of students at risk of failure were not separately studied.

Author and title	**Houtveen, A.A.M., Pijl, S.J., Pijl, Y.J., Reezigt G.J.** and **Vermeulen, C.J. (1998)** *Adaptief onderwijs, stand van zaken in het WSNS-proces*
Publication details	De Lier: Academisch Boeken Centrum
Language	Dutch
Country of origin	The Netherlands
Methodology	One part of the study deals with the question whether teachers adapt the education to the differences in student levels, and whether adaptive education affects student achievement. To select 4 high, 12 average and 4 low adaptive schools, seven criteria were used: • working according to a plan; • interventions directed towards students at-risk; • interventions directed towards gifted students; • mixing different grades; • interventions directed towards the youngest students; • co-ordination of individual pupil support; • procedure in case of problems in beginning and technical reading education. Within each participating class, five students were selected (one high performing and one low performing reader, one student with and one student without affective problems, and one average student in terms of affective and cognitive behaviour). Tests were administered on comprehensive and technical reading, and affective behaviour. Observations were conducted to determine whether the working-methods, the activities for the students, and the interactions between teachers and the selected students could be described as adaptive. In addition, teachers kept a logbook in which they answered some questions about their reading lessons.
Sample	Within each school, one 2nd (age 5–6) and one 3rd grade (age 6–7) were included with a total amount of 805 students participated (376 2nd and 438 3rd graders). The results of 730 students were used in this study.
Method of research	Students were tested and observations were conducted. Logbooks of teachers were studied.
Main findings	Analysis of logbooks and observations show no elements of adaptive education in working methods and activities for the students. Teachers generally made no difference between the students. Some elements of adaptive education were observed in teacher–student interactions. No relation was found between the degree of adaptive education and student achievement or behaviour.

Author and title	**Kool, E.** and **Derriks, M.** (1995) *Ambulante begeleiding. Werkwijzen en effecten*
Publication details	Amsterdam: Stichting Centrum voor Onderwijsonderzoek
Language	Dutch
Country of origin	The Netherlands
Type of research	Descriptive
Methodology	The second part of this study focuses on the relationship between ambulant teaching and the effects on student level. Integrated students, who are referred from a special to a mainstream school, are allowed to make use of ambulant teaching. Teachers who are connected to special schools visit the mainstream schools to work with students and to guide their general teachers.
Sample	50 special schools participated in this study (25 primary, and 25 secondary schools). Within each school, one ambulant teacher was selected. From each ambulant teacher two students and their general teachers were picked out to participate. A total of 47 primary students were selected, 24 students with severe, and 23 students with mild difficulties.
Method of research	Ambulant teachers completed questionnaires.
Main findings	Findings indicate that most students who received ambulant teaching perform in accordance with, or above expectations. Compared to their general education peers, 59–77% of these students achieve on an average or above average, in reading, spelling and maths. Concerning social-emotional functioning, for at least 81% of the students no decrease was reported; 93% of the students are considered to be motivated. Overall, 86% of the students are successfully included. Students, who were not successfully included, are mainly students with severe problems.
Evaluative commentary	Results indicate that one of the criteria to refer students to mainstream schools, and to teach them on an ambulant base, is a high level of social-emotional functioning. In this sense results could be an artefact of the selection mechanism. From the start of the placement in mainstream education, motivation and self-confidence of these students are considered to be higher then those of their general education peers.

Author and title	**Oudenhoven, D**. and **Baarveld, F. (1999)** *De opvang van gehandicapte leerlingen in het reguliere basis – en voortgezet onderwijs*.
Publication details	Nijmegen: Instituut voor toegepaste sociale wetenschappen
Language	Dutch
Country of origin	The Netherlands
Methodology	This study focuses on the following questions: • In which way is given shape to the integration of handicapped students in primary and secondary general education schools? (What provisions are made in terms of staff en material facilities, what is role of external experts) • What is the opinion of teachers and support staff on the effects of integration of handicapped students? • What are the obstructing and stimulating factors for successful integration? Questionnaires were completed by general education teachers, principals, and ambulant teachers (teachers who are connected to a special education school and visit mainstream schools to work with individual students). In addition, ambulant teachers were interviewed.
Sample	The sample of the primary education part of the study consisted of 238 principals, 232 teachers, and 173 ambulant teachers of 236 handicapped students (4 blind, 35 visually impaired, 13 deaf, 35 hearing impaired, 40 speech impaired, 46 physically disabled, 37 mentally disabled, 26 multiply disabled).
Method of research	Questionnaires and interviews.
Main findings	Regularly used practices are: • working according to a plan; • giving positive feedback; • individual practice; • independent working; • extra instruction; • the use of concrete materials. The handicapped students and their peers are treated alike, they follow the same rules. Peers are stimulated to help the handicapped students, and not to bully them. The majority of the handicapped students receive extra support by ambulant teachers outside of the classroom for an average of 11 hours a month. In order to increase expertise, teachers are usually supported by experts from special education schools and school support centres. According to teachers, students feel accepted in school and have good relationships with adults. The opinion of teachers towards the behaviour and self-confidence of the students, and their relationships with peers is also positive. Teachers judge less positive about the academic achievement and independency of the handicapped students. The majority of the principals (80%) think the inclusion of the handicapped student has had a positive effect on all students at risk. The expertise and involvement of the teachers has increased.
Evaluative commentary	The study is focused on perceptions of effective classroom practices and doesn't content evidence-based information.

Author and title	**Oudenhoven, D**. and **Petersen, B. (1996)** *De opvang van jonge risicoleerlingen*
Publication details	Instituut voor toegepaste sociale wetenschappen, Ubbergen: uitgeverij Tandem Felix
Language	Dutch
Country of origin	The Netherlands
Methodology	The main questions were: which methods are used in successful schools? why are these methods successful? and are these methods transferable? Successful schools were selected and observations and interviews were conducted in order to identify critical inclusion factors. In addition, a workshop was organized. Participants were representatives of the participating and non-participating schools, and representatives of school support centres.
Sample	Participants were 13 general education schools, which appeared to be successful in integrating students at-risk. These schools were selected by there (low) percentage of referral to special education. 3 special education schools, which appeared to be successful, participated in this study.
Method of research	Classroom observations were conducted, and teachers and principals were interviewed.
Main findings	Several variables appeared to be critical to the inclusion of students at-risk: • registration (teachers should monitor individual performances through tests and observations, and attend scheduled meetings for early intervention); • external support (school support centres); • well-balanced targets; • insight in the development of young children; • involvement of the whole team; • the use of individual educational programmes (IEP). These factors seem to be transferable. The involvement and attitude of the team are indicated to be an important condition for the transferability of these variables.
Evaluative commentary	Results, in terms of student achievement and development were not specified.

Author and title	**Scheepstra, A.J.M. (1998)** *Leerlingen met Downs syndroom in de basisschool*
Publication details	Groningen, Stichting Kinderstudies
Language	Dutch, with summary in English.
Country of origin	The Netherlands
Type of research	Descriptive
Methodology	The third part of this dissertation focuses on the social integration of children with Down's syndrome in mainstream schools. Two of the main research questions were: how are the social contacts between students with Down's syndrome and their classmates, and what role does the teacher play in these contacts?
Sample	24 3rd grade students with Down's syndrome in 24 mainstream schools were involved in this study. The average age of these students was 7.10.
Method of research	Observations were conducted. Parents were interviewed and teachers completed questionnaires. Sociometric scales and school behaviour checklists were used.
Main findings	Results show that parents and teachers are positive about the contacts of students with Down's syndrome and their peers. Observations indicate that, when compared to low and average students, students with Down's syndrome have less contacts with classmates. 'Caring' and sometimes 'wild' students have the most contact with students with Down's syndrome. To encourage contact between the Down's syndrome students and their peers, teachers actively involve them. Teachers give them a favourable place in the classroom, practise social skills between pupils and classmates, and use co-operative learning instructions. Most teachers think that the inclusion of students with Down's syndrome in mainstream schools enriches the education of the other students, and affects the social development of students with Down's syndrome positively.

Author and title	**Scheepstra, A.J.M.** and **Pijl, S.J. (1995)** *Leerlingen met Down's syndroom in de basisschool*
Publication details	Groningen: Gronings Instituut voor Onderzoek van Onderwijs, Opvoeding en Ontwikkeling
Language	Dutch
Country of origin	The Netherlands
Type of research	Descriptive
Methodology	One of the main questions was: what are the curricular contents of the educational programme for students with Down's syndrome in general education classrooms?
Sample	216 parents, 135 principals, and 116 teachers of children with Down's syndrome completed questionnaires. Observations were conducted in 12 schools; 5 teams of schools, which included students with Down's syndrome, were interviewed, as well as the parents of these students. In addition, 2 schools, which used to include students with Down's syndrome but had referred these students, were interviewed, as well as the parents of these children.
Method of research	Interviews, questionnaires and observations
Main findings	Most schools attempted to enlarge their assessment by gathering information from, and attending study days organized by 'VIM' (an association for integration of children with Down's syndrome). There are no general directives for how to teach students with Down's syndrome in regular schools. 43% of the schools make use of IEP's (individual educational programmes). Most students with Down's syndrome have an adapted programme, 84% is pulled out of the classroom on an average of 3 hours a week. Students in the lowest grades spent more time in the classroom, and followed the regular programme more than students in the higher grades. Teachers stated that they used the same didactic techniques as they used for other students with problems. These techniques mainly consist of offering the subject matter in smaller steps, and more rehearsal and more concrete instruction. The greater part of the teachers influences the interaction between students with Down's syndrome and their peers, mainly through showing the peers better ways to co-operate with students with Down's syndrome and not to patronize these students. Although teachers think students with Down's syndrome take no exceptional position in terms of contact with peers and behavioural rules, observations show that students with Down's syndrome take less initiative in interactions with peers and show more interactions with the teacher. According to the teachers, the presence of students with Down's syndrome does not affect the education of other students and has a positive influence on the social development of other students.
Evaluative commentary	The study doesn't focus on effects or output in terms of academic, social or emotional development.

Author and title	**Vosse, A.J.M (1999)** Effecten en implementatie van een tutorprogramma voor risicoleerlingen
Publication details	*Pedagogische Studiën* **76**, 201–10
Language	Dutch
Country of origin	The Netherlands
Type of research	Quasi-experimental
Methodology	A cross-age tutoring programme was established for 16 4th-grade students at-risk. These students were tutored by 16 7th-grade students. The pairs worked together during tutoring sessions for three times a week over a 12-week period, in order to raise the mathematical achievement. Main questions were whether the programme would lead to higher mathematical achievement for the 4th-grade at-risk students and whether the 7th-grade tutors would improve their maths skills at their own academic level.
Sample	The sample consisted of two treatment schools, and two comparison schools; 16 pairs of students participated in the project, each treatment school selected eight 4th-grade students at-risk (age 7–8), and eight 7th-grade students (age 10–11).
Method of research	Pre-tests on math's achievement were administered to all students in September and in January, just before the start of the programme. In June, immediately after the programme, post-tests were administered.
Main findings	Results indicate that the tutees greatly improved their mathematical attainment. The achievement of the tutors improved slightly on the sub-test 'Numbers and operations', but hardly on the sub-test 'Measuring, time and money'.

Author and title	**Wiersema, B. (1991)** *De invloed van samenwerkend leren op spellingprestaties. Verslag van vier veldexperimenten in het basisonderwijs*
Publication details	Groningen, Rijksuniversiteit
Language	Dutch, summary in English
Country of origin	The Netherlands
Type of research	Quantitative field experiments
Methodology	This study deals with the question whether co-operative learning leads to better spelling achievement, and whether this improvement can be explained by increased effort and/or by better reasoning strategies. Four experiments were carried out, in which students worked in dyads, were stimulated to consult one and other, had to wait for one and other until the exercise was completed, had to correct one and other's work and to discuss the mistakes. The students finally received an individual judgement from the teacher. All experiments took place for at least four months, and were reported separately. In the first experiment, students in an extra experimental condition received shared feedback in order to increase positive interdependence. In the normal co-operative condition students received individual judgement. Students in the control group worked individually and were judged individually. The second experiment investigated the effect of checking each other's work. In the first condition, students worked individually and were judged individually. The second condition consisted of students who checked each other's work after they had worked individually. The third group consisted of a normal co-operative condition. Experiment 3 deals with the question, whether the improvement of spelling achievement in co-operative learning settings can be explained by an increase of effort and by better reasoning strategies. Measurements of effort and reasoning were carried out. Effort was determined by observation of off-task behaviour; reasoning was determined by a test and by observations. The fourth experiment focuses on the question whether the level of social and cognitive skills of the students effects the effect of co-operative learning on academic achievement. It investigates the hypothesis of whether co-operative learning leads to an increased effort by young students (grade 6), and an increase of learning strategies by 8th grade students. Performances of co-operative learning students are compared to the performances of individually working students.
Sample	Experiment 1 218 5th grade (age 8–9) students in 13 schools were randomly assigned to the 3 conditions. Experiment 2 270 5th grade students in 14 schools were randomly assigned to 3 conditions. Experiment 3 168 5th grade students in 11 schools were randomly assigned to two conditions. Experiment 4 586 students from eight 4th grade classes (age 9–10), nine 6th grade classes (age 10–11), and ten 8th grade classes (age 11–12) in 27 schools participated. All schools were located in the north of the Netherlands (Friesland, Groningen Drenthe).

Main findings	The results are reported separately, and summarized in one general conclusion. The results of experiment 1 show that students from both co-operative learning conditions perform better than the individual working students. There is however no indication that the form of feedback (individual or shared) creates more positive interdependence. The second experiment shows that students who check one another's work but work individually perform at the same level as their counterparts who work individually as usual. Students in the co-operative condition perform significantly better and show increased effort and better reasoning strategies than the individually working students. The results of experiment 3 show no increase in spelling achievement, effort or reasoning strategies. Results show further that 5th grade students learned most words by heart, instead of applying the correct spelling rules. This leads to the suggestion that increase of achievement cannot be caused by improvement of reasoning strategies. In experiment 4 no effect on achievement improvement, and only a small increase of effort is found. The general conclusion is that co-operative learning in most cases leads to an increased effort that, however, not always positive affects academic achievement. The author suggests that co-operative learning probably facilitates development of better reasoning strategies when students learn complex cognitive concepts, but not when they learn simple cognitive concepts or use already developed complex schemes.
Evaluative commentary	Results of students at-risk are not separately investigated.

Appendix K Documents: European literature review – Norway

Author and title	**Nordahl, T. (1994)** Overland, Terje: *En skole for alle? Beskrivelse og evaluering av et forsøksprosjekt ved to skoler* [One school for all? Description and evaluation of a pilot project at two schools]
Publication details	Biri: Forum for Adapted Education
Language	Norwegian
Country of origin	Norway
Type of research	Quantitative
Methodology	This study is an evaluation of a pilot project at two schools based on the challenge of creating an inclusive school for all students. The project was implemented at two schools, which divided the intervention into six areas: organizational and administrative factors, professional content, skills development and information, interdisciplinary co-operation, evaluation and counselling. 'Professional content' included much effort to implement the use of individual learning plans on the basis of a comprehensive model. Students, parents and teachers were presented with a questionnaire that focused on well-being, participation and attitudes. In this presentation, emphasis will be placed on the student questionnaire. The analysis was divided between students with a disability and students without a disability.
Sample	Students at a primary school and a lower secondary school. Ten students had a disability and 417 students were without a disability. There was a somewhat lower response rate for students with some form of disability. The disabilities in this study were essentially major general learning difficulties or mental retardation.
Method of research	Descriptive; questionnaire
Main findings	The study indicates that students with a disability expressed a high degree of well-being and a feeling of belonging. In this area, there was no difference between students with or without a disability. Students without a disability expressed positive attitudes towards students with a disability, and the study also indicates that there is active social participation among students with and without a disability. There is a certain difference between the two types of school concerning students participation on a social level. Students with a disability at lower secondary school participate less on a social level.
Evaluative commentary	The implications for classroom practice within the scope of the restrictions of the literature review are limited due to the fact that the questionnaire includes variables at very many levels. Thus the study does not indicate any effects of specific factors in classroom practice.

Author and title	**Ogden, T. (1998)** *Elevatferd og læringsmiljø. Læreres erfaring med og syn på elevatferd og læringsmiljø i grunnskolen* [Student behaviour and the learning environment. Teachers' experience and views of student behaviour and the learning environment in primary school]
Publication details	Oslo: Norwegian Ministry of Church, Education and Research
Language	Norwegian
Country of origin	Norway
Type of research	Quantitative
Methodology	The purpose of this study was to carry out a survey of teachers' experience of behavioural problems in school. The teachers were asked to describe what they had experienced over the last week, with examples of typical problem behaviour. These teachers were also asked to describe their experience of typical problem behaviour in the classroom over the last school year and the need for educational assistance. Finally, the teachers were asked to describe their reactions to problem behaviour and to provide suggestions for initiatives
Sample	10% of all primary schools and lower secondary schools in Norway, selected at random from the Ministry's lists. The response percentage, measured in numbers of teachers who responded, was 66%, equivalent to 3,661 teachers.
Method of research	Descriptive; questionnaire
Main findings	One general recurring finding was that behavioural problems increased as students got older. In the main, the study showed little correlation between teacher variables such as gender, age, training and their assessment of the degree of behavioural problems in the classroom. Serious infringements of standards and rules occurred most often in the classes and schools where the less serious behavioural problems were most prevalent. The teachers' own evaluations showed that schools where teachers state that the school has clear standards for positive behaviour in class and in the school environment, and effective routines for following up any infringement of the school's rules and standards also experience fewer behavioural problems. The content of these standards and routines varied from school to school.
Evaluative commentary	The study shows a connection between (a) clear standards for behaviour and routines for following up any infringement; and (b) behavioural problems experienced less frequently. The study does not, however, indicate any defined content for standards and routines, nor does the design of the study make it possible to check for other causes such as educational organization. The implications for classroom practice are therefore limited.

Author and title	**Olweus, D. (1991)**
Publication details	In D.J. Pepler and K.H. Rubin (eds), *The Development and Treatment of Childhood Aggression.* Hillsdale, N.J.: Erlbaum, pp. 411–48
Language	English
Country of origin	Norway
Type of research	Quantitative, longitudinal study
Methodology	The programme tested in this study is a school based intervention programme to prevent the problem of bullying. The programme was continually evaluated, and the final report of the evaluation is the focus of this summary. The programme is based on an authoritative adult-child interaction model and on a utilization of the existing social environment: non-experts such as teachers, students and parents play a major role in the desired 'restructuring of the social environment'. The programme emphasizes measures and attitudes characterized by a combination of positive involvement from teachers and parents, firm limits unacceptable behaviour, and consistent use of non-hostile, non-corporal sanctions on rule violations. A number of specific measures based on the stated principles are used on the school, class and individual levels.
Sample	Four adjacent cohorts of 600–700 subjects each from 42 schools, 4th–9th grade
Method of research	Quasi-experimental design
Main findings	Analyses indicate that the frequency of bully–victim problems decreased by 50% or more during the two years following implementation of the intervention programme. Similar results were obtained for boys and girls and across all grades (4–9). The effects were somewhat stronger after two years than after one year. There was no displacement of the problems from the school to the way to and from school. In addition, the prevalence of antisocial behaviours in general such as theft, vandalism and truancy showed a substantial drop. At the same time, student satisfaction with school life increased
Evaluative commentary	The bullying prevention programme referred in this report contains substantial implications for practice, and will be valuable for 'the classroom practice' project.

Author and title	**Roland, E. (1999)** *School Influences on Bullying*
Publication details	Stavanger: Rebell forlag
Language	English
Country of origin	Norway
Type of research	Quantitative
Methodology	This publication makes reference to a number of studies on bullying, one of which is experimental in design. The purpose of this study is to measure the effects of a programme for the prevention of bullying. This programme consists of an intervention aimed at teachers and _ in this study _ at the form teachers. This programme is guidance-oriented, with form teachers attending for a total of four days spread over the year. These days consisted of lectures and discussions, as well as the distribution of an article relevant to the topic of the day on each occasion. In addition, the form teachers were organized into groups of six or seven and provided systematic advice for colleagues. The professional content of the programme concentrated on the improvement of the social environment in the classroom, and therefore was not restricted to bullying. Variables involved in creating a good social environment were as follows: showing consideration for individual students, clear standards and clear routines for behaviour, clear instructions in teaching plans, observation and feedback, and constructive interventions. The effects of the programme were gauged by means of a questionnaire issued to students.
Sample	The sample was divided into four groups, two control groups and two experimental groups. Each group consisted of students in the first form from nine schools, a total of 1.154 students.
Method of research	Explanatory; questionnaire
Main findings	The study indicates a significantly improved state in the experimental group compared with the control group as regards the variables 'bullying others' and 'being bullied'. According to the author himself, the difference between the groups is not as drastic as has been the case in other studies on the prevention of bullying. The study also indicates that the experimental group scored better as regards general variables in the social environment in the classroom.
Evaluative commentary	The study shows significant links between intervention and a reduction in bullying. The study describes factors in classroom practice which may form the basis for a case study on the prevention of bullying.

Author and title	**Skogen, K. (1997)** *Forskere i møte med praksis. Hvordan kan forskningen bidra til å utvikle en bedre praksis?* [Researchers meet practice. How can research contribute to the development of better practice?]
Publication details	Oslo: University of Oslo. Part of the series Quality in special educational work in the light of guidelines on educational policy: an umbrella project, Vol. 7
Language	Norwegian
Country of origin	Norway
Type of research	Quantitative/qualitative
Methodology	This study is based on the opportunity of special educational research to be in a better position to raise the skills level among educational practitioners in school. A key hypothesis was that research results are perceived as being more relevant to classroom practice if the research is based on problems defined by the field of practice. By including teachers in the research process, a long-term effect is expected for teachers in the form of improvement to their criteria for adopting the attitude of a researcher and applying it to their own practice (the scientist practitioner). The aim of the study was to obtain the practitioners' evaluation of the goals of the research, the implementation of research projects and the dissemination of research-based knowledge
Sample	The study consisted of teachers at 11 lower secondary schools, the school principal and teachers at one lower secondary school, and school principals and teachers at 11 upper secondary schools in one county, and of 8 researchers at the author's own research institution. A strategic sample was used for the study.
Method of research	Descriptive case study; questionnaire and interviews
Main findings	The study indicates that practitioners have confidence in the opportunities of the research to contribute towards better classroom practice, and that research ought not to be based on solutions in the form of 'recipes' to be used by the teacher. Furthermore, the practitioners expressed a clear wish that research based on practice must be given priority. Another tool to which the practitioners attached importance was the use of information for interaction with the field of practice both prior to, during and after the implementation of a research project. Information, both written and in the form of direct contact, would, according to the practitioners, lead to a greater feeling of participation and a greater incentive to allow the research to have an effect on what they do in practice. The results of the interviews showed a high degree of general agreement between the group of researchers and the group of practitioners.
Evaluative commentary	The study actually falls beyond the restrictions of the literature review, but is considered to be of interest. The results of the study point to specific factors for promoting the influence of research on classroom practice, and for enhancing teachers' skills and increasing their interest in carrying out research into their own practice. With this, the study describes a tool which would equip teachers with an improved ability to meet the complex challenge of inclusive classroom practice. The study attempts to act as a preliminary work for further research, and is suitable for use as a basis for further case study research in which both professional researchers and practitioners interact in the research process.

Author and title	**Tellevik, J.M., Storliløkken, M., Martinsen, H**. and **Elmerskog, B (1999)** *Spesialisten inn i nærmiljøet* [Putting the specialist into the local environment].
Publication details	Oslo: Akademika
Language	Norwegian
Country of origin	Norway
Type of research	Quantitative/qualitative
Methodology	The project involves, in particular, two objectives of interest. Firstly, to test how mobility training can contribute towards ensuring an independent life with the least possible loss of quality of life for blind and visually impaired people. User-oriented initiatives and training in the user's home environment are central concepts in the study. In other words, the mobility training was organized in the areas in which the people in question would live their day-to-day lives. One central arena for this was the school and the class to which the student belonged. Mobility training was based on learning routes, so as, among other things, to promote mobility in the classroom and at school. The second objective was to draw up enabling plans in order to co-ordinate the efforts of the various players, including the teacher, on the basis of the needs of the user. The hypothesis of the study was that the transfer of skills through the support services to the people in the immediate environment of the user presupposes clarification of roles and responsibilities regarding the implementation of an overall plan. An enabling plan was prepared for all the people included in the study. All parts of the enabling plan took as their basis the fact that the mobility training would be implemented in the areas in which the people in question would live their natural lives. At the same time, the entire support service was included in the plan, and the objective of this co-ordination was to ensure the most satisfying use of skills, viewed in terms of the requirements of the user.
Sample	Visually impaired persons between the ages of 3 and 45. A total of 19 people, of whom ten were of primary school age. The participants were recruited to the study by the national resource centres for the blind and visually impaired.
Method of research	Exploratory/descriptive; survey/observation
Main findings	One central finding of the study was that the use of enabling plans was most important in order to achieve user orientation, a long-term perspective and totality in the service offered to users. It was possible to prepare enabling plans for only half the users in the study. Both the users and the support service deemed the relevance and the outcome of their efforts to be improved in the cases where enabling plans had been prepared. This applied in particular to making special skills relevant and accessible in the areas in which the people in question would live their lives. The results of the study indicate that mobility training based on learning routes led to greater independence and quality of life. This was shown by the fact that the training resulted in qualitative improvements as regards initiative and activity, and that the users demonstrated a qualitative improvement of their spirits and well-being.

Evaluative commentary	The study actually falls beyond the restrictions of the literature review, but is considered to be of interest. This study is one of very few covering the whole support service for specific users. The study provides a model for the co-ordination of various supporting authorities and shows how enabling plans help to put the role, responsibility and skills requirements of the teacher into concrete terms. The study thereby also constitutes a model relating to how special knowledge and expertise as found in the national resource centres can become relevant for the teacher and the student and as such to create good classroom practice. The results of the study as regards enabling plans is thus generally applicable for case studies relating to all students who receive, or ought to receive, support from a number of authorities other than just the school. The study is particularly suitable as a basis for case studies of visually impaired students. It demonstrates a method for mobility training rooted in theory which, taking as the starting point the user's activities and route training, has shown qualitative enhancement of the quality of life. The method for mobility training is specific and can also form the basis for a case study limited to the school and the classroom.

Appendix L Documents: European literature review – Sweden

Author and title	**Ahlberg, A. (1999)** *På spaning efter en skola för alla*
Publication details	Specialpedagogiska rapporter, No. 15, September, Göteborgs universitet, Institutionen för pedagogik och didaktik.
Language	Swedish
Country of origin	Sweden
Type of research	Qualitative
Methodology	Theoretical and empirical. The basis of the theoretical part is the school as an institutional and social practice. Knowledge and research from education and special education are used, for example curriculum theories, social cultural perspective, action research, 'phenomenography' and special educational theories. The basis of the empirical part is the special teacher's counselling with a class teacher and what is found out in the counselling session about the two teachers' co-operation around the pupils in a class of first- and second-year pupils. The aim is to make the pedagogical practice visible and how the school meets the whole range of variety of pupils with different backgrounds and experiences. Focus is on mathematics.
Sample	A special teacher is informed about the aim and disposition and considered it possible for her to participate. She tells the teachers at her school about the project, one of the teachers announces her interest. These two teachers' community, school, headmaster, pupils and one assistant and two 'recreation' teachers agree on co-operating in this case study. The pupils are in first and 2nd grade (7 and 8 years old). There are 25 pupils, 15 girls and 10 boys. 12 pupils are in the first-grade and 13 in the 2nd grade. In the class there are three boys with an individual educational plan. Two boys have psycho-social problems, and one boy needs special support in mathematics
Method of research	A case study. The researchers (Ahlberg and a colleague) have during one year visited one school and participated regularly in counselling sessions, taped interviews with assistants, a headmaster, a recreational leader/teacher, participated in informal conversations and have done some classroom observations. The study has an explorative character and is influenced by action research as the aim of the research is to contribute to a development of the work in the classroom. Inclusive in the case study material is also the local school plan, teachers' and pupils' written documentation of some planning documents and reflections on teachers' enacted lessons as well as some evaluations of some counselling sessions. In the beginning and at the end of the study an interview/dialogue was done with every pupil in the class about their point of view and attitudes towards mathematics and school.
Main findings	The case study is directed to both a local level, towards the individuals, and a national level and the national curriculum. Both connected by the counselling dialogue between the two teachers involved and classrooms observations. The counselling have implications for special education. In the studied and observed class there is one pupil in need of special support. To handle this situation different solutions are tested, from both an organizational, group and individual point of view. The findings show that of importance is content of education, teacher's ways of acting, flexibility in thinking and ability to be empathetic to the pupil's situation. The counselling also contributes to the development of the teachers´ thinking and action. A model of counselling is put forward in terms of reference-direction-movement. Besides three critical dimensions of school work are seen as crucial to reflect upon for all working at school: • school as a social practice; • learning; • the goals and values of the school.

Evaluative commentary	The empirical part is limited to concern the co-operation between one teacher and one special teacher, both working with the same pupils in their first or second year at school. The purpose of limitation is said to give a deeper process-directed analysis and to discover and describe eventual changes in ways of behaving and opinions within the teacher and the special teacher. Another limitation might be that the pupils experience of change is not studied. Even though Ahlberg (1999, s. 79) writes that the pupils are present and participating by the classroom observations, their perspectives have not explicitly been put forward in the result.

Author and title	**Hemmingsson, H., Borell, L.** and **Gustavsson, A. (1999)** Temporal aspects of teaching and learning – implications for pupils with physical disabilities
Publication details	*SJDR* 1(2)
Language	English
Country of origin	Sweden
Type of research	Qualitative
Methodology	Earlier research on temporal structure and dimensions are used to analyse what hindrance or help the pupil with physical disabilities receive from temporal structures to perform daily school activities.
Sample	Boys and girls with physical disabilities who attend compulsory comprehensive school; seven pupils from different grades, different schools and different regions; one pupil attends a special education class, i.e. a small class specifically for pupils with physical disabilities, the other six pupils are in regular classes; seven pupils, age 7–15, 3 boys and four girls, from five different schools in five different towns are included in the study.
Method of research	Field interviews and semi-structured observations with pupils' and each pupil's teacher
Main findings	In this study they find that the schoolwork of pupils with physical disabilities is affected by time problems. The time schedules do not seem to be the major problem. Instead, the time can be understood on the basis of the current teaching styles and the teachers approach to an educational dilemma. Four teaching styles are identified. The most interesting finding is that the teachers in the study seemed to be forced to choose between 'time for doing' and 'time for knowing'. The teaching style implies the tempo and the timing for task performance and other forms of learning, which in turn influenced the pupils time problems in class. Four different teacher styles are identified. The *conductor style* is found to be the most demanding for many pupils with physical disabilities, since this teaching style demands that all the pupils have to keep the same pace. During the lessons where the *dialogue style* is applied, the studied pupils do not suffer from any great time problems, since time of task performance can always be adjusted to each pupil's ability. In the *individual task style*, the pupils have the best opportunities to carry out daily school activities by themselves as the flexibility of task performance was good, and the pupil do not have to adjust to anybody else. The findings in this study indicate that the teaching style to some extent seems to define the role of the assistant as well as the pupils' opportunities to direct the assistant and to choose how things should be done.
Evaluative commentary	One possible limitation in this study is the lack of data about how pupils experience the time demands of the teaching styles used and their opportunities to perform in class

Author and title	**Tinglev, I. (2000)** *Innehåll och stöd i läsande och skrivande för elever i svårigheter. En tolkning av nio elevers svenskundervisning och specialundervisning med utgångspunkt i två undervisningsparadigm* (Content and support in reading and writing for pupils in difficulties: an interpretation of Swedish and special education for nine pupils from the point of view of two educational paradigms)
Publication details	Uppsatsarbete på D-nivå. Pedagogiska institutionen, Rapport nr 6, Umeå University
Language	Swedish
Country of origin	Sweden
Type of research	Qualitative
Methodology	A hermeneutic interpretation of observations on classroom practice done by students at the special education programme. The theoretical groundings for the interpretation are two paradigms on learning and development in reading and writing; one focusing the individual, the other focusing conversation, context and co-operation.
Sample	Nine observations on pupils in reading and writing difficulties during their Swedish and special education lessons, done by students at the special education programme in spring 1999. The age of the pupils are from 6 to 14. Interviews are also made with the nine pupils' teachers in Swedish and special education.
Method of research	Field observations and unstructured interviews
Main findings	The content do not differ for children with or without difficulties. Most of the education in Swedish was about letters, grammar, reading for information, reading for adventure or experience. The support used in the classroom is often piloting but sometimes even invisible. Most of the content and support given to these nine pupils are closely related to the paradigm focusing the individual.
Evaluative commentary	The empirical data is collected by students and is from the beginning a task in a course. Some lack of information on the paradigm focusing the context, conversation and co-operation makes the empirical material a bit vague. The voices of the pupils are missing. Another weakness is that the empirical material is a secondary resource.

Appendix M Documents: European literature review – Switzerland

Author and title	**Bernard, S. (1998)** *Projekt Integration. Umgang mit Heterogenität in der Schule*
Publication details	SIDOS-Datenbank: 5622
Language	German
Country of origin	Switzerland

Author and title	**Bétrix Koehler, D. (2000)** *Differenzierung und formative Evaluation im Leseunterricht der ersten Primarschuljahre*
Publication details	SKBF-Datenbank: 00:011
Language	German
Country of origin	Switzerland

Author and title	**Bless, G. (1995)** *Integration schulleistungsschwacher oder lernbehinderter Kinder durch heilpädagogische Stützmassnahmen*
Publication details	SKBF-Datenbank: 95:053
Language	German
Country of origin	Switzerland

Author and title	**Doudin, P-A. (2000a)** *Evaluation du projet pilote d'enfants d'une institution spécialisée dans l'enseignement régulier*
Publication details	SIDOS-Datenbank: 6628
Language	French
Country of origin	Switzerland

Author and title	**Doudin, P-A. (2000b)** *La situation scolaire des enfants portugais dans le canton de Vaud. Projektleitung*
Publication details	SIDOS-Datenbank: 6700
Language	French
Country of origin	Switzerland

Author and title	**Grossenbacher, S. (1993)** *Stützen und fördern in der Schule: Zur Entwicklung integrativer Schulformen in der Schweiz*
Publication details	SKBF-Datenbank: 93:091
Language	German
Country of origin	Switzerland

Author and title	**Haeberlin, U. (1992)** *Chancen und Probleme der Zusammenarbeit von Lehrpersonen in integrativen Kindergärten und Schulklassen*
Publication details	SKBF-Datenbank: 92:060
Language	German
Country of origin	Switzerland

Author and title	**Hildbrand, J. (1990)** *Zürcherische Schulversuche mit integrativen Schulungsformen für Schüler mit Schulschwierigkeiten*
Publication details	SKBF-Datenbank: 90:073
Language	German
Country of origin	Switzerland

Author and title	**Houbé-Müller, D. (1996)** *Randständige Immigrantenkinder in Schulklassen: qualitative Analysen der sozialen Bedingungen und ihrer personalen Bewältigung*
Publication details	SKBF-Datenbank: 96:070
Language	German
Country of origin	Switzerland

Author and title	**Hutmacher, W. (1994)** *Analyse du redoublement dans l'enseignement primaire genevois*
Publication details	SIDOS-Datenbank: 1214
Language	French
Country of origin	Switzerland

Author and title	**Marc, P. (1997)** *L'utilisation inégalitaire du temps comme révélateur d'excellence scolaire à l'école neuchâteloise*
Publication details	SIDOS-Datenbank: 5020
Language	French
Country of origin	Switzerland

Author and title	**Müller, A. (1991)** *Kommunikation und Schulversagen*
Publication details	SKBF-Datenbank: 91:045
Language	German
Country of origin	Switzerland

Author and title	**Nicolet, M. (1996)** *Vorgehensweisen bei der Integration fremdsprachiger Kinder in den Waadtländer Schulen*
Publication details	SKBF-Datenbank: 96:005
Language	German
Country of origin	Switzerland

Author and title	**Nicolet, M.** und **Grossen, M. (1999)** *Schulischer Misserfolg von Ausländerkindern, Wissensvermittlung und soziale Interaktion im Schulzimmer*
Publication details	SKBF-Datenbank: 99:076
Language	German
Country of origin	Switzerland

Author and title	**Schubauer-Leoni, M.L. (1993)** *Lernschwierigkeiten, Rollendefinitionen von Institutionen und Praktiken der Unterstützung*
Publication details	SKBF-Datenbank: 93:080
Language	German
Country of origin	Switzerland

Appendix N Documents: European literature review – United Kingdom

Author and title	**Ainscow, M. (1999)** *Understanding the Development of the Inclusive Schools*
Publication details	London: Falmer
Language	English
Country of origin	UK
Type of research	Prescriptive book written on the basis of a number of research studies carried out over a number of years by the author
Main findings	The book covers a wide range of inclusion issues. Specific to this review is the chapter on 'moving classrooms': • barriers to participation can be identified if classroom teachers are encouraged to examine their practices carefully and systematically; • consideration should be given to the most effective use of learning support assistants; • pupils should be encouraged to co-operate to create classroom conditions that maximize participation; based on a corpus of research the following are recommended for group work: ♦ positive interdependence (common goal); ♦ individual accountability (all members have specific task/role); ♦ face-to-face interaction (dialogue promotes progress); ♦ social skills (taking turns, listening, checking, probing etc.); ♦ processing – group's self-assessment of collaborative efforts; • teachers within a school need to develop a 'shared language' in which to discuss what is happening the classrooms and to articulate what is often intuitive and unconscious.
Evaluative commentary	While largely a 'how to do' book, the author has been a respected practitioner in the field and recommendations are made on the basis of research studies and systematic reflection on practice observed.

Author and title	**Bennathan, M. (1997)** Effective intervention in primary schools: what nurture groups achieve
Publication details	*Emotional and Behavioural Difficulties* **2**(3), 23–9
Language	English
Country of origin	UK
Type of research	Not research – comment from experience
Methodology	n/a
Sample	n/a
Method of research	n/a
Main findings	The total environmental support afforded by nurture groups leads to positive learning, reduction in exclusion and suspension of pupils for unacceptable behaviour, and a reduction in referrals for formal multi-disciplinary assessment
Evaluative commentary	Not a research study but included as author has had wide involvement in running and training nurture groups throughout her career. Has reasonably compelling anecdotal evidence.

Author and title	**Bennett, N. and Cass, A. (1989)** *From Special to Ordinary School*
Publication details	London: Cassell
Language	English
Country of origin	UK
Type of research	Qualitative
Methodology	Case studies
	To provide knowledge about the process of integration
Sample	Five pupils with special educational needs at age of primary-secondary transfer (opportunistic)
Method of research	Interviews with LEA officers, staff in schools, parents, pupils. Observation of classroom practice.
Main findings	Wide-ranging in terms of the whole process of planning and provision for pupils with special educational needs. Specific to this review: the quality of pupils' experiences in mainstream school was compromised by lack of curriculum continuity and poor assessment of skills on entering and by lack of extension work; only two pupils were more engaged in their work in ordinary school than they had been in special school; the breadth of curriculum was satisfactory in three cases, poor in two.
Evaluative commentary	The study produces evidence to show that successful integration of pupils from special schools into mainstream schools depends on very close liaison between the two schools; the transfer of relevant records about attainment, aptitudes, learning styles etc.; careful curriculum planning; and mainstream teachers who are able to differentiate the curriculum and assessment effectively.

Author and title	**Centre for the Study of Inclusion (CSIE) (2000)** *Index for Inclusion*
Publication details	Bristol: CSIE. Developed by consortium of institutions in collaboration with LEAs and schools which assisted in trailing
Language	English
Country of origin	UK
Type of research	Action research
Methodology	Action research
Purpose	To develop a set of materials to support schools in a process of inclusive school development by self-review
Main findings	The desirable conditions for inclusive classrooms implied by the materials produced for school self-evaluation include the following: • an induction programme to welcome new students to the school/classroom; this programme should be effective regardless of the time of a student's entry to the school/class, the previous attainment or the home language of the student; new students should be clear as to whom to go to if they experience difficulties; • strategies to improve students' self-esteem; • management and career structures for learning support assistants; • focus on the student's perspective; • collaborative training for support assistants and teachers; • collaborative learning among students; • attention to home-school communication; • shared understanding of what constitutes bullying, a clear statement about bullying, support for students who experience bullying, the involvement of students in creating strategies to counter bullying; • lessons are responsive to student diversity, accessible to all students and develop an understanding of difference; • students are actively involved in their own learning, learn collaboratively; • assessment encourages the achievement of all students; • homework contributes to the learning of all • all students participate in activities outside the classroom; • resources are distributed to support inclusion; • staff expertise is fully utilized; • student difference is used as a resource for teaching and learning.
Evaluative commentary	This is a set of self-evaluation materials rather than a research report. However, it is based on a long tradition of research at the authoring institutions and the materials were extensively trailed during the process of development. The publication is thus worthy of inclusion in the present review. The materials pose a series of questions to the reviewing organizations; these, by implication, suggest a series of 'desirable conditions' for inclusion (see above)

Author and title	**Hastings, N.** and **Schwieso, J. (1995)** Tasks and tables: the effects of seating arrangements on task engagement in primary schools
Publication details	*Educational Research* **37**(3), 279–91; independent research
Language	English
Country of origin	UK
Type of research	Observation
Methodology	Observation of classes when changed situation, when situation reverted to normal, and when situation changed again (ABA, BAB)
Purpose	To examine differential effects of seating pupils in rows and in informal table-based groups (the latter is more common in English primary schools)
Sample	Two parallel classes of pupils aged 9–11 (15 m and 16 f; 18 m and 13 f)
Method of research	Two weeks per phase: Class 1: ABA (rows, groups, row); Class 2: BAB (groups, rows, groups). A subsequent study focused on three 'disruptive' pupils: two phases – baseline and post-intervention
Main findings	On-task behaviour for all pupils was higher when pupils were seated in rows. The pupils who were least on-task gained the most from row seating. There was less difference in behaviours (low, medium and high on-task behaviour) when seated in rows. Most off-task behaviour was in group seating. Pupils preferred group seating. The disruptive behaviour of the three focus pupils decreased considerably and their on-task level when seated in rows was higher than the class mean.
Evaluative commentary	There was limited data collection and no account of pupil learning nor quality of task engagement. Pedagogy did not change as pupils were given individual tasks when seated in groups.

Author and title	**Iszatt, J.** and **Wasilewska, T. (1997)** Nurture groups: an early intervention model enabling vulnerable children with emotional and behavioural difficulties to integrate successfully into school
Publication details	*Education and Child Psychology* **14**(3), 63–70; independent research – result of LEA monitoring of provision
Language	English
Country of origin	UK
Type of research	Interpreting regular monitoring data
Methodology	Examination of throughput (pupils in and out) and rates of referral for formal multi-professional assessment of pupils in (preventative) nurture groups
Purpose	To assess the value of nurture groups in one LEA
Sample	Nurture group population in one LEA
Method of research	Comparison of situation in matched primary schools operating nurture groups and those not operating them
Main findings	Pupils entered and exited nurture groups within three terms – thus the measure was perceived as short-term and quickly remedial. In the schools with nurture groups, there were three times fewer referrals for formal assessment (statementing) and seven times fewer requests for LEA support service intervention for behavioural difficulties. LEA observers reported that nurture groups benefited the whole primary school as they represented a source of support for the whole staff, offered advice regarding assessment and ensured continuity for the pupils concerned. Pupils were reported to gain confidence and self-esteem which, in turn, enhanced their capacity to learn.
Evaluative commentary	Not a rigorous evaluation but based on LEA officers' analysis of the situation in one London borough. The officers had an interest in evaluation for reasons of efficiency and effectiveness, i.e. was money for favourable pupil–child ratio well spent?

Author and title	**Jordan, D.** and **le Metais, J. (1997)** Social skilling through co-operative learning
Publication details	*Educational Research* **39**(1), 3–21; independent research
Language	English
Country of origin	UK (and Australia)
Type of research	Intervention and observation
Purpose	To assess the effect of co-operative learning on pupils' social skills
Sample	Class of 26 pupils aged 10–2; focus on 4 m and 2 f pupils with a range of social and academic abilities
Method of research	Pupils were put into groups and then smaller groups and engaged in diagnostic activities. Then they engaged in skill development around a computer immersion program. having to undertake group tasks and role taking.
Main findings	Intervention focused on co-operative learning helped to build social cohesion; the reluctant were drawn in; role-play developed skills; pupils worked with peers with whom they would have declined to work previously. The classroom was more inclusive and pupils more open to others' suggestions.
Evaluative commentary	It is unclear as to whether effects were the result of co-operative learning or of the novelty value and attractiveness of the computer-based intervention; and unlikely that similar effects could not be achieved by other means.

Author and title	**Lee, B.** and **Henkhusens, Z. (1996)** *Integration in Progress: Pupils with Special Needs in Mainstream Schools*
Publication details	Slough: NFER. Council for Local Education Authorities
Language	English
Country of origin	UK
Type of research	Qualitative; case studies
Methodology	Questionnaire survey of all Local Educational Authorities in England and Wales followed by an interview programme with a selection of respondents (21 LEAs). In-depth case study work in two mainstream secondary schools in each of five LEAs
Purpose	To investigate the position regarding the integration of pupils in schools across England and Wales; to examine the impact of recent educational and resourcing strategies on the integration of these pupils
Method of research	Extensive interview programme with all relevant staff and parents; documentary analysis; observation of classroom practice.
Main findings	Multiple and various on integration generally. Specific to classroom practice: • where schools were given a budget which they had the discretion to allocate, they were able to ensure more flexible and appropriate support; • appropriate levels of coverage and expertise as regards support in the classroom were most effectively secured by a team of teachers and learning support assistants; • setting (grouping pupils by ability across an age cohort) was considered to make most effective use of resources as support could be targeted at the lower ability sets; however, bottom sets could represent a wide range of ability and needs; • learning support staff were valued in classrooms and requests for them exceeded the staff hours available; • where there was a learning support teacher attached to a subject department, there was greater scope for departments to consider the needs of all pupils, to develop schemes of work and to discuss individual cases to decide on coherent approaches; • learning support teachers worked most effectively where they were involved with all pupils in a class rather than just for selected individuals; • subject teachers needed encouragement to consider the implications of information received about pupils with special educational needs; • different approaches to differentiation were considered appropriate according to the subject: in English, by outcome; in science by different levels of schemes of work; in mathematics, by individualized schemes; • teaching strategies were mostly extensions of those already used – 'good teaching' – rather than specific approaches for specific difficulties.
Evaluative commentary	A well conducted study which identified good practice from multiple sources. The research showed the importance of whole school policies for special educational needs: these inhibited or facilitated possibilities for inclusive practice in individual classrooms.

Author and title	**Swinson, J.** and **Melling, R. (1995)** Assertive discipline: four wheels on this wagon – a reply to Robinson and Maines
Publication details	*Educational Psychology in Practice* **11**(3), 3–8; independent research
Language	English
Country of origin	UK
Type of research	Observation pre-and post-intervention
Methodology	Classroom observation
Purpose	To investigate the implementation of assertive discipline in two junior schools
Sample	Nine classes of pupils aged 8–11 in two junior schools
Method of research	Observation during training of teacher but before implementation, compared with observation six weeks after implementation. Observations of 30 minutes, recording pupil behaviour: on–off task, nature of off-task, frequency of off-task, rate of teacher verbal approval/disapproval
Main findings	Positive outcomes following the intervention, which followed teacher training; increase in appropriate on-task behaviour, decrease in frequency of pupil disruption of lesson, increase in rate of teacher praise (affecting classroom atmosphere), decrease in amount of teacher disapproval (verbal comments).
Evaluative commentary	Small-scale study with subjective assessment of 'on/off task' behaviour. Effect could have cause other than the intervention itself

Author and title	**Thomas, G., Walker, D.** and **Webb, J. (1998)** *The Making of the Inclusive School*
Publication details	London: Routledge
Language	English
Country of origin	UK
Type of research	Qualitative
Methodology	Single case study
Purpose	To chart the process of closing a special school and placing all the pupils in mainstream schools with support from staff previously employed in the special school
Method of research	Interviews, documentary analysis, observation
Main findings	Varied, relating to the whole process of closing a special school. Of particular relevance to classroom practice were: • those supporting individual pupils must have clear lines of management and work as a team with the class teacher; • pupils were included by a range of classroom strategies: altering the format of the lesson, changing the arrangement of groups, changing the way in which instruction was delivered, adapting goals, using different materials, providing alternative tasks; • social relationships in inclusive classrooms were enhanced by: carefully structured joint activities, opportunities for co-operation in classwork, altered classroom layout and organization, systems for facilitating peer co-operation (peer tutoring, buddying systems, circles of friends etc.); • mainstream teachers benefit by on-going support and advice with including pupils with significant difficulties; • non-contact time needs to be available for joint planning between teachers, support assistants and co-ordinator; • IT can be a valuable resource for inclusion if used imaginatively.
Evaluative commentary	A well-conducted study which stresses the importance of whole school policies backed up by support from the local education authority/wider environment

Author and title	**Weston, P., Taylor, M., Lewis, G.** and **MacDonald, A. (1998)** *Learning from Differentiation: A Review of Practice in Primary and Secondary Schools*
Publication details	Slough: NFER
Language	English
Country of origin	UK
Type of research	Quantitative and qualitative
Methodology	Survey of headteachers of primary and secondary schools; in-depth case studies of ten schools
Purpose	To examine current issues in differentiation and study a range of practice in primary and secondary schools
Sample	Four secondary, five primary and one special school
Method of research	Questionnaire, telephone interviews, face-to-face interviews (range of staff and pupils), observation of practice
Main findings	• Schools need to pay more attention to instructing pupils in the relevant skills of managing their own learning and the art of working productively with others. • Schools need to create a climate where it is natural to make explicit both learning targets and the criteria for success. • Planning task and materials for varying levels of ability and to accommodate different learning styles was more likely to occur throughout a school – rather than in isolated pockets – where there was clear guidance and support from senior management. • Teachers' adaptations were usually made incrementally as they got to know their pupils rather than on the basis of diagnostic assessment. • Teachers were only just beginning to develop a shared language in which to discuss achievement and assessment criteria with their colleagues and with their pupils. • Pupils were too often required to play a passive and conformist role. • A considerable length of time is required to build a comprehensive and coherent strategy for differentiation, in particular to achieve the real culture change that was evident in a few of the case study schools. • Schools were beginning to focus on what makes for effective learning for all pupils rather than specifically on differentiation; in management terms, this required a focus on: better information about how and what pupils are learning and more rigorous, self-critical and collaborative professionalism. The study suggested that, in the light of the problematic nature of realizing differentiation effectively in the classroom and of recent national policy, the term differentiation will lose favour as practitioners focus on raising standards of achievement for all pupils. In order to effect this, the authors suggest that attention will turn from pupil grouping to teacher development. In particular, the following skills are critical: • skills of using evidence to analyse and evaluate individual performance; • skills of curriculum planning and target setting; • pedagogic skills – making expertise explicit; • skills in managing learning.
Evaluative commentary	This report includes a useful review of the literature. Present study based on over ten years of the study of differentiation at the NFER. Context of national policy is relevant but the doubts about differentiation and focus on professional development are in tune with other studies (e.g. see Ainscow, 1999 in this review).

Author and title	**Wheldall, K.** and **Panagopolou-Stamatelatou, A. (1991)** The effects of pupil self-recording on on-task behaviour on primary school children
Publication details	*British Educational Research Journal* **17** (2), 113–20; independent research
Language	English
Country of origin	UK
Type of research	Observation, pre- and post-intervention
Methodology	Pilot study followed by main study
Purpose	To investigate the effects of engaging pupils in the assessment of their own behaviour
Sample	Pilot: maths lessons in class of pupils aged 9–10 (20 male, 10 female) in urban Midlands town in UK, experienced teacher (23 yrs as teacher). Main: English classes for pupils aged 8–9 (16 m, 12 f); 9–10 (12 m, 9 f); 10–11 (14 m, 12 f).
Method of research	Pilot: observed three times a week for 4 weeks (2 weeks pre-intervention, 2 weeks post-intervention). Pupils had to record their own behaviour every minute (at prompt of a buzzer) following discussion as to definition of on/off task and imposition of set of rules (e.g. stay in seat, hand up before speaking), Main: Observation of whole class plus focused observation of three pupils per class,
Main findings	Increase in on-task behaviour for all classes and decrease in amount of teacher negative, disapproving comments. Post-intervention, girls seemed to retain new behaviour better than boys. All focused pupils improved in behaviour except one. Increase in quantity of writing produced.
Evaluative commentary	Very small study. Effect not necessarily on account of intervention (e.g. novelty value). System for recording etc. (buzzer) distracting and could not be sustained in normal classroom situation. Accuracy of self-recording dubious. The positive outcomes may have been simply on account of the fact that the nature of desirable/undesirable behaviour was discussed with the pupils.

Author and title	**Wood, S., Hodges, C.** and **Aljunied, M. (1996)** The effectiveness of assertive discipline training
Publication details	*Educational Psychology in Practice* **12**(3), 175–81; independent study
Language	English
Country of origin	UK
Type of research	Comparison of classrooms with and without intervention (training of teachers in assertive discipline)
Methodology	30 minute observations in maths, English, science, history and geography classes in 12 schools
Purpose	To study the effects of the introduction of assertive discipline
Sample	6 control and 6 targeted schools (in each group, one nursery, two infant, two primary and one secondary school)
Method of research	Observation, teacher interview, teacher questionnaire
Main findings	Teachers trained in assertive discipline made more positive comments to pupils than the controls did, and more positive than negative comments overall; the trained teachers also praised more and reprimanded less than the control group in relation to both social and academic behaviour
Evaluative commentary	Other aspects of teacher behaviour may have changed – thus effects may not be attributable to particular intervention. Pupil effects were not recorded. Long-term effects were not recorded.

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