



AN ROINN OIDEACHAIS
AGUS EOLAÍOCHTA

DEPARTMENT OF
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AND SCIENCE

INSPECTORATE



Effective literacy and numeracy practices in DEIS schools

Inspectorate Good Practice Guides



Effective literacy and numeracy practices in DEIS schools

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Foreword

Teachers and inspectors often ask themselves and their colleagues, “Is there a better way to help children to learn?” In this publication, inspectors describe some of the ways in which they have seen schools tackle this question in the area of literacy and numeracy.

This publication is intended to support the sharing of good practice among schools and teachers. It describes a range of approaches that teachers and school communities have taken to the teaching of literacy and numeracy in eight schools designated as serving areas of considerable socio-economic disadvantage. The schools are supported by DEIS (Delivering Equality of Opportunity in Schools), the action plan for educational inclusion of the Department of Education and Science. Each of the schools has its own distinctive characteristics but they all share a commitment to bringing about improvements in teaching and learning. In various ways, they are making carefully planned and sustained efforts to enhance children’s learning in literacy and numeracy.

None of these schools would say that it has the perfect solution to improving literacy and numeracy but I am sure that you will find the efforts and insights of the teachers and

school communities involved to be stimulating and inspiring. I am certain, too, that many other examples of good practice could be found in similar schools throughout the country.

I wish to thank sincerely the principals, teachers, support staff, pupils, boards of management and other personnel of the schools who took part in this study. They were open in sharing their strategies, programmes, views and ideas and took pride in showing how they get on with the complex business of teaching and learning. I hope that the stories of their work in the chapters that follow will promote discussion, reflection and questioning about how we can improve children’s learning in all our schools.



Eamon Stack
Chief Inspector





Chapter 1

Introduction

In choosing to tell the stories of these eight schools, it is hoped that others will be inspired by their success.

Introduction

This publication describes effective literacy and numeracy approaches used in eight schools participating in the Delivering Equality of Opportunity in Schools (DEIS) action plan, the action plan for educational inclusion of the Department of Education and Science. One of the specific recommendations in that action plan required that the Inspectorate follow-up on its report *Literacy and Numeracy in Disadvantaged Schools: Challenges for Teachers and Learners*, (Inspectorate, 2005). The Inspectorate was requested to identify existing models of best practice in literacy and numeracy, with a view to disseminating them and promoting their wider application. The eight schools whose work is described in this publication are typical of many good schools around the country. But what sets these schools apart is that they operate in areas of high socio-economic disadvantage, and for that reason their achievements are all the more impressive. Indeed, their work is reflective of many other fine schools in similar situations making a difference to the lives and future prospects of the pupils in their care. In choosing to tell the stories of these eight schools, it is hoped that others will be inspired by their success.



Profile of the eight schools

The eight DEIS schools described in this publication represent a range of school types and locations. They share many common characteristics. DEIS schools typically serve high-density areas of local authority housing, with higher than normal levels of unemployment and large numbers of single-parent families. Many of the schools are large, built in times of unprecedented growth in towns and cities during the 1970s and 1980s. In recent times, many of these areas are in a period of growth and regeneration. As a result, enrolments in many of these schools are increasing significantly and include a more diverse population with up to one-third of newcomer pupils in some instances.

All eight schools featured in the publication receive extra supports from the Department of Education and Science in terms of staffing, funding and training. In addition to mainstream teaching staff, the schools have a large number of special education support teachers. In many of the schools, the number of teachers assigned to the provision of additional supports to pupils is equivalent to the number of mainstream teachers. These include many of the following: learning-support/resource teachers (LS/RT), resource teachers (RT), resource teachers for Travellers (RTT), teachers for pupils with English as a second language (EAL), special-class teachers and home-school-community liaison (HSCL) co-ordinators. In many of the schools, a member of staff has trained as a *Reading Recovery* tutor and training has also been provided to nominated teachers for the *First Steps* programme as well as in *Maths Recovery*. Some of these

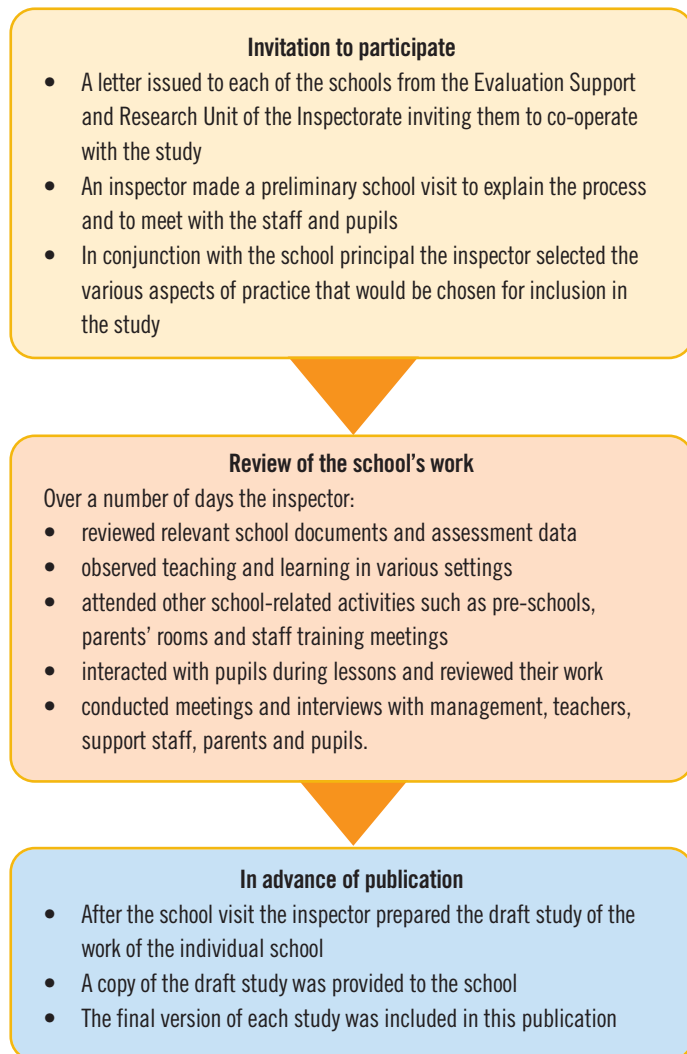
schools incorporate special class units for pupils with specific educational needs. For example, a number of schools have classes for pupils with speech and language disorders. Many also have an *Early Start* pre-school attached to the school.

The challenges faced by many DEIS schools also exist in these eight schools. School attendance is a matter for concern for them as absenteeism is a major impediment to the improvement of literacy and numeracy. Moreover, they often contend with a high turnover of staff which makes it harder to sustain continuity and impetus in the delivery of whole-school programmes. Yet, in all of these schools an atmosphere of order, industry and purposeful learning prevails. These schools have addressed the issue of school improvement head on and, in doing so, are helping to secure a better future for the children in their communities. In describing their effective educational practices it is hoped to disseminate them to other schools and to assist teachers in raising literacy and numeracy standards.

The process of reviewing the work of the schools

During the school year 2007-08, the Inspectorate invited a number of schools to participate in its follow-up study to the report, *Literacy and Numeracy in Disadvantaged Schools: Challenges for Teachers and Learners*. The schools were selected using a range of information available to the Inspectorate. The process of reviewing the work of the schools is described in fig. 1.

Fig. 1: The process involved in reviewing the work of the eight schools



Layout of the publication

The work of each of the eight schools is described in individual chapters. Chapters 2, 4, 6, 8 and 9 describe effective practices in respect of literacy in five schools and chapters 3, 5 and 7 are focused on teaching and learning in Mathematics in three of the schools. Included in the appendix are details of the participating schools and some background information on the various programmes implemented in schools under the DEIS initiative.



Chapter 2

School 1

**The journey to maximising
literacy achievement**

When a five-year old pupil patiently explains to you that she is “chunking” a word in order to say it correctly, it’s time to sit up and pay close attention to what is going on in the school.

Introduction

When a five-year old pupil patiently explains to you that she is “chunking” a word in order to say it correctly, it’s time to sit up and pay close attention to what is going on in the school. For here in this 38-teacher, co-educational school, there is an exciting, new literacy project underway, based on the school’s belief that “Literacy is not a luxury; it is a right and a responsibility.” This project is called *Finding a voice; sharing a vision*. The main elements of the project include a systematic, whole-school approach to raising literacy standards; an in-school literacy team who are active mentors for staff members; the targeting of the specific language needs of their pupils and the school’s certainty that it can stand as a clear example of how any school can tackle literacy with professional confidence and competence.

School background

This large school has an enrolment of 464 pupils which comprises 32% newcomer pupils and 13% Traveller pupils. It is located in a large housing estate in one of Ireland’s largest towns. The school campus brings together many essential initiatives, services and agencies for the benefit of the local community. On the school site there are two pre-schools, the *Springboard Initiative* for family support services, and a parents’ room. The school has a comprehensive special education support team, including a teacher for the special speech and language class and a home-school-community liaison co-ordinator. There is a strong culture of distributed leadership



within the school. A significant number of the teachers have completed, or are currently pursuing, post-graduate studies. In recent years the school has prioritised the development of early-literacy skills. The *Reading Recovery* programme has been in place in the school since the 1990s.

What is happening in respect of literacy education in this school?

Whole-School Review and Pilot Study 2005-06, 2006-07

In 2005, using the findings from a recently completed school inspection report and cumulative standardised test results, the teachers began to take a very close look at literacy standards. A team of teachers carried out a comprehensive whole-school literacy review. This in-depth review involved pupils, teachers and parents. Questionnaires, interviews, consultation, baseline data and an audit of resources were used to collect information on what was actually going on in the school. The baseline data was drawn from all infants and from three “tracker” pupils from each class level, in the 30th, 50th and 80th percentile rankings. The data comprised the cumulative results of standardised and non-standardised tests¹ as well as formative assessments of reading, writing and spelling. The findings delivered strong evidence for the need to raise literacy standards. The review also highlighted the willingness of the staff to update their teaching skills. It was agreed that all proposed practices would be based on research as well as successful teacher experiences. The overall aim was to enable all pupils to experience small but consistent successes.

A team of three senior members of staff, all experienced *Reading Recovery* tutors, devised a co-teaching approach to literacy teaching called the *literacy work station model*. In 2005 this literacy team asked teachers to volunteer to try out their approach. Seven teachers undertook a six-week pilot study of the model. They received a high level of support involving modelling of lessons and mentoring from the literacy team. Other staff members were invited to watch them try out the new teaching approaches. After the pilot phase, the “pilot” teachers evaluated the approaches. They presented their findings to the staff stating that the collaborative model of teaching was “effective and essential.” They recommended unequivocal adoption of the new model on a whole-school basis. The staff agreed. The pilot study and peer mentoring was expanded in 2006-07, culminating in the production by the school of a training DVD for the literacy work station model for the staff.

The Literacy Work Station Model

Participation in the literacy work station session is timetabled for an hour each day. Every classroom displays the session’s timetable in the form of a pupil-friendly icon chart. During each literacy hour, the pupils have an opportunity to spend time at four, out of the five, different work stations. The five stations incorporate focused activities in:

- listening
- guided reading
- independent reading
- writing
- word-detective work (phonics, vocabulary extension and sentence construction).

¹ The school staff utilised the *Drumcondra Primary Reading Test – Revised (DPRT-R)*, the *Middle Infant Screening Test (MIST)*, *Rain Sentence Reading Test*, and the *British Ability Scales (BAS) Word Reading Test*.

Every pupil spends twelve minutes at each of four stations followed by a whole-class plenary session. All pupils participate in guided-reading and word-detective work on a daily basis.

In order to run the various stations concurrently, the mainstream class teacher is assisted by other school staff involved in the school's learning and special education support. The mainstream class teacher directs the guided reading station and the learning-support teacher manages the word-detective station. A watchful eye is kept on the pupils' self-directed work at the other stations. All activities have clear learning objectives. The materials and resources are differentiated to meet the pupils' abilities and interests. There is a comprehensive school-wide support structure in place. The literacy team, led by the literacy project co-ordinator, provides a high level of ongoing support, training and encouragement to all staff.

The Listening Station

The listening station is managed by the pupils themselves. A group, led by a captain, listens to the recording of a story or a shared-reading session. The station is set up with a junction box, compact disc player, headphones and multiple copies of the recordings to which they will listen. The captains are taught how to load and retrieve the disc, distribute materials, record text, time, date and page and distribute and collect work files. The pupils displayed an impressive level of independence and co-operation in setting up the activity. For example, in fifth class I watched as the group assembled quietly and assumed their positions under the watchful eye of

their captain. Within two minutes, they were all listening attentively on their headphones to the escapades of Captain Jack Sparrow, books on laps, eyes tracking text, imagination cast adrift on the high seas. When I questioned them about the listening station the pupils enthused about it, "It is so peaceful, it's time out." A lot of care has been taken to ensure that the selected material exposes the pupils to a wide range of texts.

The Guided Reading Station

Time spent at the guided reading station is compulsory in every literacy session. Here, the teacher teaches reading skills and strategies, using texts that provide an appropriate level of challenge. The choice of texts is monitored closely to ensure that they are at the appropriate instructional level for each pupil. The key aspects of this session include the revision of the concepts of print (for example identifying the blurb, spine, author and title); re-reading a familiar text from the previous day; reviewing difficult words; and then moving ahead to the reading of new text or a new book. The teacher uses encouraging prompts and questioning techniques to encourage the pupils to attempt new words: "Good try", "Well done", "Have a go", "What do we do here?", "Try chunking it." The teacher records the pupils' reading in a reading log and they engage in shared-reading at home with family members.

The Library Station

The aim of the library station is to enable the pupils to read independently. It is organised comfortably with cushions and rugs, while posters, large-format books and pupils' work are

The pupils are offered a wide variety of writing tools such as coloured pencils, pens, and crayons, as well as various types of paper.

displayed with care. The reading materials have been chosen assiduously and are presented in four browsing baskets. There is a reference book basket; a comic/newspaper/ periodicals basket; a poetry basket; and a basket for the pupils' own anthologies and word-detective books. The reading material is graded in order to accommodate the pupils' varying reading abilities. The group captain logs the reading texts that the pupils select and then the pupils sit comfortably, read and enjoy themselves. A child described the library session to me as "... quiet time, where no one talks." It is evident that the pupils enjoy the calm and orderly nature of the library where they can choose their reading material independently.

The Writing Station

The writing station is designed to give the pupils a sense of control over what they write, and how they record it. The pupils are offered a wide variety of writing tools such as coloured pencils, pens, and crayons, as well as various types of paper. The teacher provides a menu of writing activities that have been taught previously at a whole-class level. In the writing station at infant level, the pupils draw and scribble, form letters and write captions, lists and sentences. As the pupils progress through the school, the writing station activities provide them with options about writing content and audience. Some of these options are drawn from the *First*

Steps programme and include fact files, menus, letters, reports and other cross-curricular genres. The pupils are encouraged to brainstorm and plan what they will write. Particular care is taken to ensure that the classroom environment supports the pupils' writing needs. There are interactive word walls, word families, posters for grammar and punctuation conventions on display as well as clear guidance on genres and samples of the pupils' work. The pupils select their best efforts to be placed on display in the writing corner. The teacher closely monitors the quality of the pupils' writing to inform future lessons.

The Word Detective Station

The word detective session is probably the most highly structured session. It involves the direct, systematic teaching of phonics, new vocabulary and sentence construction. The teacher sits with a group and engages the pupils in drill work using flashcards, charts, posters and word walls. It is an interactive, briskly paced session. The pupils write their new letters, words and sentences using small whiteboards, markers, magnetic letters, sound boxes and sentence cards. At the word detective station the pupils are introduced to the *Four Step Challenge*. This is a unique approach devised by the project co-ordinator to help pupils tackle new words. The pupils are taught a specific strategy which involves asking

themselves four sequential questions when looking at an unknown word:

- Is there a big word hiding?
- Is there a little word hiding?
- Is there a big sound hiding?
- Is there a little sound hiding?

This strategy is described as “chunking” and every pupil in the school can recite the *Four Step Challenge* with confidence. All classrooms display the colourful posters outlining the challenge and identifying the words, sounds and rules that can be employed in tackling new words.

Another important aspect of the word detective session is the use of a kinaesthetic approach to learning punctuation. The pupils use actions, sounds and explanations to accompany each punctuation mark. A whole-school spelling programme has recently been devised by the literacy team and introduced in the school. This comprehensive programme, set out in booklets, provides pupils with attainable weekly targets which allow them to show what they know and celebrate their successes. It involves self assessment, parental feedback and teacher feedback using words, stamps and icons.

The Plenary Session

Every literacy lesson concludes with an eight-minute plenary session called *Newstalk*. The pupils give feedback about the last activity in which they engaged and talk about the strategies that they found helpful in completing the task. This plenary session gives the pupils the opportunity and time to recap on what they have learned and to develop their presentation and listening skills.

Changes for the pupils

In all classrooms the pupils have become quite adept at describing what they are learning and how they are learning. They are, in their own words: “chunking”, “drafting”, “looking for a small word”, “brainstorming” and “reading with expression.” I could see that they enjoyed “chunking” their new words and practising their word-attack skills. The majority of pupils are capable of expressing their thoughts and actions using full sentences. They read with a heightened sense of expression. “If you express it, then you show feeling for it and it makes more sense,” a child explained to me. The teachers reported to me that the pupils now read with greater fluency from a wide range of texts. As well as anecdotal evidence from their own observations, the teachers

As well as anecdotal evidence from their own observations, the teachers use standardised and non-standardised modes of assessment to track the pupils’ progress.

use standardised and non-standardised modes of assessment to track the pupils' progress. The results are very promising. The pupils have become more independent as learners and move confidently through the stations choosing books to read and selecting topics for writing. The pupils also work well together—they are co-operative and responsible. The group captains' efficiency is especially impressive.

The pupils also have an important role in educating their parents about how things happen in the school. They are given the task of demonstrating new strategies, skills and resources to their parents at a number of parent and child sessions during the school year. For example, on *Children Show the Way Day* a very large group of parents and grandparents congregated in the hall where they were welcomed in English and in Polish. The pupils took to the stage and proceeded to "teach" their families the school rules, how to "chunk" and how the new spelling programme works. They are the vital link between school and home and they prove themselves to be capable ambassadors for the school.

Changes for the teachers

All the teachers reported that the supportive school culture had been an important factor in giving them the confidence to undertake the literacy project. Many mainstream teachers spoke to me about the confidence they gained from the structured nature of the literacy work station model. One

teacher reflected, "The timetable and organisation used to be a challenge; now it is structured and I can confidently do reading every day with each group and I have the time to stay with the group." There is widespread appreciation of having a specific, research-based approach to the teaching of reading. The teachers are using an extended range of effective strategies as they move away from didactic teaching. Some teachers told me that their new teaching approaches for literacy have improved their teaching of other curriculum areas. These teachers are also striving to ensure that activities and resources are differentiated for the needs of each group. They use a range of formal and informal assessment procedures and are greatly encouraged by the outcomes of their assessments. This adds to their job satisfaction. "I know that I am going to make a difference today," stated one teacher with assurance.

The special education teachers find their work in mainstream classrooms very rewarding due to the structured, collaborative nature of the session. They believe that the high level of collaboration has had an empowering effect on all participants in the project. They explained to me that co-teaching benefits all pupils and leads to an overall improvement in learning as each teacher gives of their best and pupils love the variety. Mainstream class teachers told me that co-teaching with the special education teachers has provided them with a better understanding of pupils with additional learning needs.

The teachers are convinced of the value of information and communication technology (ICT) to teaching and learning. They use computers and interactive whiteboards to support the teaching of the curriculum. The school's computers are networked. Individual teachers have protected access to school documents, plans and policies and use the school's computers to compile assessment data and share new methodologies. The recently produced DVD of the literacy project is an excellent example of the school's practical use of ICT to encourage consistency in the teaching of a programme across the school.

Lessons for others

A number of themes have emerged as the critical factors in bringing about sustainable and meaningful change in this school.

Leadership

The teachers believe that strong, decisive leadership is critical to success in raising standards in literacy. The leadership roles and functions of the principal, the senior management team and the literacy co-ordinators are clearly defined in the school's literacy action plan. The board of management and the in-school management team are committed to building the leadership potential among the staff and in building their expertise and confidence in the school's chosen educational programmes and teaching approaches. The management and staff believe that a shared vision is vital for the pupils' successful learning and they are committed to helping the school community to understand and approve that vision.

They believe that the involvement of external support agencies is equally vital in promoting and endorsing that vision. These agencies have become part of the school's "Community of Learners". The literacy team was especially appreciative of the help, insights and recommendations offered by the inspectors and the personnel from the former School Development Planning Service and from the Home-School-Community Liaison Scheme.

Managing change

An important lesson from this school is the need to accept that implementing effective educational practices is a long-term investment. This is not a quick fix. It takes a long time to establish new approaches in every classroom. In this school the elements of the literacy project are being introduced slowly and purposefully. The stations are taught one at a time. This ensures that the teachers are given the opportunity to become confident in their new teaching strategies. During my discussions with the teachers they advised me that any new whole-school practices are best introduced initially through a controlled, time-bound pilot study which is carefully monitored and evaluated. At present, the literacy project is underway in sixteen classes and will be extended to all classes in the next school year.

Support and training

The management of the school stresses the fact that effective learning must be informed by research as well as established good practice. The co-ordinators keep abreast of educational research, some of which is generated by members of the staff. An ongoing programme of in-school training, modelling

and mentoring is provided. The school has very close links with its associated religious order, whose mission informs and supports the school's commitment to improvement. Literacy programmes and initiatives require sustained investment over time. To this end the school's management is committed to securing funds through Department of Education and Science and local grants, fundraising and the support of local enterprise. These monies are used to build up substantial literacy resources and to provide training opportunities for the school management, the literacy team, teachers, special needs assistants and parents.

Effective communication channels

When I interviewed parents and community representatives, a mother paraphrased an old saying when she said, "It takes a community to raise a child." She was speaking about the many ways in which this school works with parents, the extended family and the community. The school works hard to develop effective communication channels that overcome language barriers. Parents are encouraged to come to the school regularly to celebrate the ongoing successes of their children, to discuss their progress and to assist in shared-learning opportunities. The voice of the pupils is also listened to and acted upon through their work on the student council.

Conclusion

The teachers in this school firmly believe that consistent improvement requires careful analysis and planning. They gather assessment data and consider it carefully in order to plan the way forward. In May 2007 they compiled a comprehensive SCOT analysis to assess the strengths, concerns, opportunities and threats to improving teaching and learning. They used data gathered from school staff, parents, pupils, feeder schools, evaluation and assessment. A detailed "picture" of the school now exists as a platform for the next stage of strategic planning. This has helped the management and staff to identify a set of specific success factors that will inform the work of the school over the next three to five years. With a clear vision and strong, purposeful leadership, this school is striving to make a difference, and succeeding.



SCHOOL



Chapter 3

School 2

**Improving teaching and learning
in Mathematics**

They are aware and proud of what they have achieved but they look to the future and realise that there is still much that can be done to make learning and teaching better.

Introduction

“Our school is great because we have so much to do. We would never run out of work to do in a full year.” This statement from a fourth-class pupil captures the essence of this busy, vibrant school. But it is not the vibrancy and busyness that makes the difference, but rather the fact that it is a *thinking* school. The management and teachers are constantly looking to improve standards. They are aware and proud of what they have achieved but they look to the future and realise that there is still much that can be done to make learning and teaching better.

Just over two years ago, taking into account the findings and recommendations of a whole-school evaluation report by the Inspectorate, the management and teachers examined why the pupils were not achieving as well as they might in Mathematics. They considered their own confidence in teaching the subject and looked at what were the areas of greatest weakness in their whole-school practice. They identified that improving their own ability and skills in teaching Mathematics could have the greatest impact on the pupils’ learning and they determined to be better teachers of Mathematics.

School background

Many of the teachers have taught for many years in this large town school. They know each other well and co-operate effectively. They celebrate each others’ achievements and are particularly proud of the pupils’ successes in sport. The

principal has a long association with the school. She encourages her staff to be innovative and is proactive in promoting its professional development. She is careful to celebrate the teachers' professional and personal achievements. The teachers' birthdays are celebrated and whole-staff recreational events are scheduled regularly as the principal believes that teachers work best when they are happy and feel part of a team. She puts a lot of effort into ensuring that communication within this large school is as open and transparent as it can be. For example, two staffroom notice boards are consulted daily by teachers: one with updates regarding current projects and another providing information about scheduled meetings and professional courses. Furthermore, accounts of the school's activities and achievements are published regularly in the local newspaper and parents are kept informed about developments through frequent newsletters and updates.

There is a tradition of shared leadership in the school and post-holders have unambiguous curricular responsibility. They are responsible for learning and sustaining improvements in their assigned curricular area. In addition, each subject area becomes the centre of attention for one week each year and a post-holder is responsible for leading the events of the

week. For example, the post-holder for Mathematics organises the *100th Day of the Year* which will be described later.

In a very short time, there has been considerable development in the teaching of Mathematics in this school and evidence of clear improvement in the pupils' attainment. This chapter will describe some of the approaches undertaken by the teaching staff to become better practitioners and to facilitate better learning.

What is happening in respect of numeracy education in this school?

Classroom environments

Initially, the management and teachers decided to enhance the mathematics environment throughout the school. As a consequence, each classroom has a clearly designated mathematics area where large mathematics books, concrete learning aids, mathematics trails, posters of whole-school strategies for conducting various computations and operations as well as many other relevant resources are prominently displayed. The language of Mathematics is everywhere. Relevant vocabulary spins on ceiling mobiles and

The principal . . . encourages her staff to be innovative and is proactive in promoting its professional development. She is careful to celebrate the teachers' professional and personal achievements.

key symbols, words and phrases are displayed on notice boards. Teachers design their own posters, drawing from the concepts, language and skills that the pupils specifically require. These posters outline for the pupils how to set about solving problems, step by step, using methods that are taught uniformly and consistently in every classroom. The teachers have been creative yet practical in providing resource materials to support teaching and learning. Even metre sticks are used in a multi-purposeful manner. They are adapted and clearly marked to represent tenths enabling them to be used in the teaching of equivalence across percentages, fractions and decimals.

The mathematics table in every classroom presents fun, challenging tasks for pupils including *Sudoku* and *Crack the Code*. Each classroom is encouraged to complete at least one mathematics project per year. Examples of this are where one class designed its own mathematics book incorporating the year's work in an easy to read, large-format scrapbook and another class compiled its own book of how to teach subtraction in print and photographic format.

A whole-school approach to problem-solving

When the teachers analysed the pupils' standardised test results, as well as the results from continuous assessments, they found that the pupils often struggled with written problems in Mathematics. They found that the pupils lacked confidence and frequently complained that they didn't know what to do when faced with a lot of words and numbers at the same time. Individual teachers were assigned to research the suitability of a variety of problem-solving approaches and,

following discussion, one approach was selected and implemented on a whole-school basis. Each classroom now displays the RAVECCC (Read, Attention to key words, Visualise, Estimate, Choose numbers, Calculate, Check) step-by-step approach to problem-solving. To instil this approach, the pupils, in every classroom, are presented daily with a "problem of the day" selected from an age-appropriate bank of problems. The teacher reads the problem aloud and encourages the pupils to discuss various ways in which the problem might be recorded and solved. Particular emphasis is placed on guiding them to develop and use specific strategies to solve problems. The teachers take care to give the pupils sufficient time to work through the problem, sometimes individually and often in pairs or in groups.

An agreed structure to every mathematics lesson

Mathematics lessons are timetabled for approximately forty-five minutes daily. This exceeds the suggested minimum weekly time for the subject as outlined in the *Primary School Curriculum* (1999) but the teachers devote some of their weekly discretionary time to the subject.

The mathematics lesson is structured in a very clear manner and all teachers follow the same lesson sequence. For the senior pupils, the introduction to each lesson has four set stages. First, the pupils are assigned a series of short, snappy tasks based on simple operations such as addition or subtraction and using the topic of the week to contextualise the operations for them. These are completed by the pupils using markers and individual small whiteboards. When each

pupil completes the simple computation task, for example taking nine euro from the piggy bank that contains eighty-seven euro ($87 - 9$), he or she shows the board to the teacher. The next stage of the introduction lasts for five minutes. It involves the pupils tackling a more complex operation. Again, each child attempts it individually and

The mathematics lesson is structured in a very clear manner and all teachers follow the same lesson sequence.

shows their approach to the teacher on the whiteboard. To maintain the pupils' interest, they next play a mathematical game such as the loop game. Following that, the pupils are given a sheet of tables (addition, subtraction or multiplication) and have to complete as many as they can correctly within two minutes. These sheets are adapted to match the abilities of the various groups within each class and help build up the pupils' confidence as well as mastery of simple computations.

During the developmental or central phase of the lesson, a specific concept or skill is taught slowly and thoroughly. At all times, the teachers emphasise the link between the various strand units of the mathematics curriculum and the fact that numbers take many different numerical and representational forms (for example fractions as decimals, a whole number in

expanded form, or a fraction on a number line) and can be thought about and manipulated in many ways to serve a particular purpose. The teachers consciously use the strand units to teach *Number*. This means that length, money, capacity, chance, angles and other strand units are addressed and referred to frequently during lessons. In any given lesson, three or more strand units are often discussed.

To conclude the lesson, the teachers distribute differentiated tasks and problems to the various ability groups in the classroom. These tasks are clearly explained and possible strategies for solving the problems are elicited from the pupils prior to beginning the paper-and-pen exercises. At this stage, the pupils are often encouraged to work together in pairs to work out the solutions, using any available mathematical resources. They are given time to talk together and to try out a number of ways of coming to a solution. These problems are revisited on subsequent days, if necessary.

The use of mathematics trails

The teachers have devised an excellent range of mathematics trails and these are filed for common use in the central resources room. These trails are categorised according to strand and strand unit and age appropriateness. Each teacher undertakes a series of these trails during the school year. While I was visiting the school the senior classes completed a trail in a local supermarket. The teachers had obviously spent a considerable amount of time compiling the trail. Working in pairs, the pupils completed a series of computation tasks involving real-life household products. They compared prices of various products and worked out the best value per kilo

between competing products. The teachers were very mindful of the safety and welfare of pupils during the trail and had implemented a code of safe conduct.

The junior pupils undertake their trails within the school building or on its grounds. One particular trail involved the pupils observing and noting the various works of art and other items on display along the corridors of their classrooms. The pupils were asked to look at a particular picture and list or count specific items such as, “How many animals can you see in the picture?” and “How many shapes are on the

there are three groups in every class. Rather than withdrawing those pupils for support who achieve the lowest scores in tests, the learning-support teacher provides in-class support for Mathematics wherever possible. The pupils who have achieved less well are targeted for maximum attention during in-class support sessions.

At the development stage of the mathematics lesson the mainstream teacher focuses on one group while the support teacher focuses on another. The third group works on independent tasks for a while and both teachers rotate

Rather than withdrawing those pupils for support who achieve the lowest scores in tests, the learning-support teacher provides in-class support for Mathematics wherever possible.

robot?” Teachers often post maths trails on the windows facing the school playgrounds so that the pupils may voluntarily complete the trail during their recreation periods.

In-class support by learning-support teachers

As is common practice in many schools, standardised tests are conducted in all classes from first to sixth at the end of each school year. Each teacher also administers a series of tests throughout the year to monitor the pupils’ progress and the results are carefully recorded. On the basis of the teacher’s analysis of all the test results, the pupils in each class are grouped according to mathematical achievement. Typically,

groups so that all three groups are attended. Both teachers teach the same strand unit but at a pace appropriate to the ability of the group in question. At various times, the whole class convenes together and brainstorms a particular topic where ideas are recorded on a concept map.

During co-teaching sessions, each teacher focuses on the pupils’ development of crucial classroom skills such as turn-taking, active listening and the ability to explain a point of view clearly. The teachers believe that the pupils feel less intimidated within the smaller group setting and will risk being wrong. The teachers emphasise a hands-on approach

and encourage pupils to use equipment individually, in pairs and in groups. They stress the importance of estimation strategies. There is a focus on the memorisation of tables and regular testing helps in this regard. The learning-support teacher carefully logs the progress of the targeted pupils very carefully. The teachers debrief on a regular basis and are careful to discuss what went well and not so well so that they can improve their practice.

Some other worthwhile approaches

Celebrating the fundamental importance of 100 in our lives and in our metric system the teachers and pupils celebrate, in a variety of ways, the week in which the 100th day of the year occurs. They host a costume day and schedule a series of events, all involving the number 100 in one way or another across all subject areas. For example, in English, the pupils write articles, poems and stories that are exactly 100 words long. In History, parishioners who are 100 years old are invited to come in to talk to the pupils about their lives and their families. In Mathematics, the teachers set challenges for the pupils and organise activities that involve 100. The pupils conduct tallies, work out averages, arrive at totals and devise maths trails all focusing on 100. The activities extend to the pupils' homes as well with pupils seeking out, for example,

food packages weighing 100g or containers holding 100ml. At the end of the week all of the new activities and tasks are stored centrally for use the following year or for updating at a later stage.

The use of mathematics games is promoted throughout the school. Each class plays a selection of commercial games such as *Blast Off*, *Snakes and Ladders*, *Ludo* and *Bingo* on a regular basis. In many classes, the pupils have devised their own games with imaginative names such as *Flower Power* and *Stars and Bars*. From time to time, parents are invited to the school to play some more traditional games with their children. For example, during the *Mathematics for Fun* project, parents support teachers in this way over a six-week period. During the celebrations for the *100th Day*, the school hosts a variety of interactive activities in which parents visit classrooms and work with pupils.

Changes for the pupils

The pupils' attitudes to Mathematics have changed. The majority now rate it as one of their favourite subjects. Assessment evidence shows that they are achieving success in

During co-teaching sessions, each teacher focuses on the pupils' development of crucial classroom skills such as turn-taking, active listening and the ability to explain a point of view clearly.

Several teachers commented to me that they were more confident in their teaching of Mathematics now that they have clear guidance on how to structure a mathematics lesson.

problem-solving. The pupils are afforded time and opportunity to solve problems based on real-life experiences. They have been taught how to use various strategies which assist them in working through problems. For example, they are encouraged to “act out” the problem or to look for a pattern or to draw a picture. They are encouraged to make tables or lists and to guess and check. Using simple, easy to follow strategies the pupils have begun to see problems as a challenge awaiting solution rather than unsolvable and disheartening conundrums. The various initiatives such as the 100th Day and mathematics trails have encouraged the pupils’ participation in and enjoyment of Mathematics.

There is regular home-school communication about Mathematics ensuring that parents are aware of the programme taught in the school. Workshops have been conducted for parents who wish to assist their children with Mathematics.

Changes for the teachers

The teachers reported that they no longer think about improvements as being solely about their own practice and their own classroom. They plan together to bring about

sustained changes in practice as well as improvements in learning across the whole school. They remarked to me that their process of collaborative action planning has been a key factor in identifying priorities as well as the stages in addressing these priorities. The teachers have asserted control over what they intend to improve and how they will know when the targets have been met.

The process of whole-school action planning has been complemented by the teachers planning their work in class groups. The teachers meet fortnightly for an hour to plan their programme for the next fortnight. During this time they discuss the specific curriculum content for the particular class level and they agree on the content of lessons, the use of resources, the compilation of worksheets, trails and tasks and also the use of information and communication technology. This regular arrangement for collaborative planning gives the teachers the opportunity to talk about what is working well for them and what still needs to be improved.

Several teachers commented to me that they were more confident in their teaching of Mathematics now that they have clear guidance on how to structure a mathematics lesson. They stated that their teaching was more focused and involved higher levels of participation from the pupils. In

particular, they believed that the pupils had more effective opportunities to revise and consolidate their knowledge and skills through purposeful activity-based learning.

In-class support by learning-support teachers has been a successful development in the school. Initially, some staff members were anxious about the practice but all agreed that it had been a change for the better. They also felt that it should be reviewed regularly as they are convinced that the form of support provision should be dictated by the needs of the pupils.

Lessons for others

A number of important lessons have emerged from this school's determination to improve standards of Mathematics.

Curriculum leadership in Mathematics

The teachers in this school agree that whole-school changes in practice are only feasible if effective curriculum leadership is provided to initiate and sustain the required changes. They believe that naming a teacher as being responsible for spearheading improvements in Mathematics is fundamental to success. In this school, a post-holder was assigned to promote the subject and to monitor progress in achieving the targets set out in the school's action plan. She was responsible for leading research in best practice in areas such as mental maths, problem-solving, and the use of assessment to improve learning and teaching. She also co-ordinated the compilation of useful resources including mathematics trails.

The teachers believe that support from the management was critical for the success of school improvement. Under the principal's careful stewardship operational issues were addressed to facilitate team planning in Mathematics. This included providing teachers with the time and space to plan, providing money for resources and facilitating the trialling of new methodologies. Regular staff meetings and team meetings were facilitated to advance whole-school improvement in identified areas of Mathematics.

Mathematics-rich environment

The teachers believe that the pupils should be surrounded by Mathematics. They devoted considerable time to enhancing the quality of the mathematics environments in their classrooms and around the school. There are attractive displays of mathematics vocabulary, posters outlining approaches to operations and strategies for problem-solving in every classroom and on the corridor walls. The pupils are provided with constant visual reminders of how Mathematics helps people to live in and relate to the world around them.

Taking the time to implement agreed whole-school strategies

The teachers are clear that planning takes time. They feel that there is a need to provide support to teachers individually and collectively to ensure that specific developments are implemented on a whole-school basis. Introducing new interventions and teaching strategies creates insecurity and uncertainty among teachers, challenging them to make significant changes in their attitudes as well as their practices. They believe that even the best teachers can, at times, neglect

to implement elements of whole-school planning and that monitoring and review are vital. In this school, the teachers took ample time to analyse the pupils' attainment patterns and monitored learning outcomes carefully over one year. They identified five areas which required improvement: mental mathematics, the use of trails, the structure of mathematics lessons, the development of mathematical language, and the teaching of problem-solving strategies. The teachers took time to plan their approach to improving practice in the five areas and were afforded opportunities to plan together.

Conclusion

It will take another year or two to see whether the recent improvements in standardised test results are sustained, but for the moment the principal, teachers and pupils are justifiably delighted with their successes to date. As an added bonus, a significant number of teachers now claim that Mathematics is their favourite subject. Success indeed!





Chapter 4

School 3

**Raising literacy standards
through collaboration**

The teachers believed that working alone in solitary classrooms would not bring about whole-school improvement in literacy.



Introduction

Entering this primary school it's not only the colour and creativity that is arresting, there is also a genuine sense of warmth and welcome. All visitors are greeted with great courtesy and old-world hospitality by the staff and pupils. You can sense warm, positive and respectful relationships among the staff and between the staff and pupils. The teachers' commitment to their pupils extends far beyond their work in the classroom and the set hours of the school day.

While courtesy, hospitality and dedication are admirable attributes and worthy exemplars for pupils, they are not sufficient to improve literacy standards. However, there are two things that make this school that bit more special. First, the teachers agreed that if the pupils were taught in a focused and enthusiastic manner they would make significant progress—regardless of the pupils' backgrounds and whether or not they had learning difficulties. Secondly, the teachers decided to take collective responsibility for the care and education of the pupils. These two concepts were introduced in staff discussions and have since become ways of working. The teachers believed that working alone in solitary classrooms would not bring about whole-school improvement in literacy and so a paradigm shift occurred. Collective responsibility required collaborative

working. As one teacher told me, “Learning to work with others wasn’t that easy but it has been a real pleasure. I don’t feel so alone anymore and it has become much easier to seek help and advice from others when I need it. It’s good for the pupils to see teachers learning too.”

This chapter considers some of this new learning for both the teachers and the pupils as it relates to the collaborative work practices that have been most successful in improving literacy: collaborative planning; co-teaching phonological awareness; the *First Steps* writing initiative; and teaching of the novel.

School background

This school, situated in a large developing town, has a reputation for being innovative and progressive. In recent years the school’s management has decided to promote four themes:

- the development of the school as a learning community, especially but not exclusively, for the pupils
- the sharing of leadership so that all the teachers assume leadership roles in response to the prioritised needs of the school
- building the capacity of the management, teachers and parents so that they are better able to support the pupils’ learning
- cultivating a sense of belonging within the school and creating beneficial links with the local community.

The management’s promotion of these particular themes has encouraged staff members to attend professional

development courses to enhance their expertise in special education and *Reading Recovery*. The teachers have utilised the support services for schools very beneficially in addressing any area where they thought that their own practice could be improved. Furthermore, individual teachers have undertaken curriculum leadership roles to support the improvement of literacy teaching and learning throughout the school. Initially, these curriculum leaders led the staff in reviewing existing literacy teaching practices throughout the school. Following the review, the teachers decided to hold on to many of the literacy teaching methodologies that they had successfully tried and tested but they also researched and introduced new initiatives wherever they deemed it necessary.

What is happening to improve literacy education in this school?

Collaborative planning

According to the teachers the secret to the school’s success is “working together for the benefit of us all.” In particular, they believe in collaborative planning and they meet regularly in small groups and as a whole staff in order to plan effectively. At managerial level, the senior management team meets after school once a month and the principal and deputy principal have a scheduled meeting every week. Post of responsibility holders also meet once a month after school. Full-staff meetings are held once a term in accordance with Department of Education and Science guidelines. Additional full-staff meetings take place when important issues arise and it is a reflection of the teachers’ commitment that they schedule all additional staff meetings after school hours.

Teams of teachers from each class level meet every week to plan their schemes of work. Infant teachers meet during the hour when their pupils go home earlier than the more senior pupils. Other class teachers meet together after school. These meetings are brief and follow an agreed format: they plan for what the pupils must know or be able to do; what the pupils should know or be able to do; and what the pupils could

Through the consistent teaching of this programme, the teachers feel that the pupils develop an awareness of the sounds, component syllables and onset and rimes within words.

know or be able to do. All teachers plan according to the objectives of the curriculum and use a common template. For planning purposes, a member of the special education teaching team is assigned to work with the mainstream teachers at each class level and attends their planning meetings as appropriate. Every month each class level team and the assigned special education teacher meet with the principal to update her on the progress of the various initiatives and projects being undertaken at each class level. These meetings are organised to the point that one teacher has the task of bringing the treats for the meeting! The

special education team also convenes its own meetings once a month with the principal.

All this collaborative planning and working could be quite intimidating for new teachers so a mentoring system was established. One staff member acts as mentor to new teachers, arranging opportunities for them to observe best practice and advising them on how to seek assistance when needed, particularly in relation to refining specific teaching strategies.

Co-teaching of phonological awareness

The teachers use a commercial programme² to teach phonological awareness in the pupils' early years. The programme is used alongside other emergent-reading activities such as the use of picture books, stories, poems and rhymes. The phonological awareness programme works on the basis that pupils can read, write and spell words by analogy, through having heard or read a similar sound or word previously. Through the consistent teaching of this programme, the teachers feel that the pupils develop an awareness of the sounds, component syllables and onset and rimes within words. This awareness is linked to the written form of words, assisting pupils in developing early-reading skills.

The programme is delivered to pupils in senior infants, first class and second class. It is taught for eight weeks, four days a week for fifteen minutes daily. Four teachers support the programme in each classroom: three learning-support/resource teachers and the mainstream class teacher.

² *Phonological Awareness Training*

School 3 – Raising literacy standards through collaboration

Following an assessment of each pupil's phonological awareness, the pupils are grouped according to ability. Each group starts at the level determined by their success in the test. For example, when I visited the school there were four groups operating concurrently in first class at levels 1, 5, 10 and 20, each being taught by one of the four teachers allocated to the classroom. Each daily session involves the use of worksheets and activities relating to a particular aspect of phonological awareness such as onset and rime. The pupils are encouraged to use an alphabet to help them to find a variety of letters to make new words. They are given time to visualise new words as well as segments of words and they write and record their list of new words for future use.

During each session, the previous day's lesson content is revised and the pupils' knowledge of that content is assessed. The teachers carefully record the number of words read correctly by each pupil and the time taken to do so. The assessment strategy requires the pupils to colour in similar-

sounding words on a sheet and to spell them in written form. They also read and write sentences dictated by the teacher, and are given an opportunity to check and record their progress.

During the eight weeks of the programme, the four teachers debrief regularly through informal chats about the pupils' progress but they also meet formally for about fifteen minutes each week to update each other on how things are going for each group and to decide what adjustments are necessary. One mainstream teacher told me that she felt empowered by the opportunity to co-teach stating that "At first it was strange to have other adults in my classroom but their positive words about my teaching are an added bonus. It's lovely to be told that you are doing well." A learning-support/resource teacher told me that "I love the chance to work in the classrooms. I feel that I am part of a team and the programme offers a good structure to work with."



First Steps—an approach to teaching writing

The teachers use *First Steps*, a programme supported by the Department of Education and Science to teach writing to the first-class pupils. To ensure that the programme can be implemented with small groups of pupils, two teachers—the first-class teacher assisted by a learning-support/resource teacher—work collaboratively in the classroom. The pupils are divided into five ability groups. Each day, one teacher teaches the *First Steps* writing programme to one of the groups and the other teacher focuses on specific reading strategies with another group. During that period, the remaining three groups work independently on carefully prepared literacy tasks. The five groups are rotated from day to day.

During the lesson that I saw, the teacher modelled the process of narrative writing for the pupils. Using the pupils' recent library visit as a stimulus for writing, the teacher was guided in her work by the teacher's manual for *First Steps* which outlines ideas and strategies to help pupils to write their own stories. Using a flipchart, magnetic letters and a magnetic board, she led the pupils in creating a story. She encouraged them to reflect on a setting for the story and to focus on possible characters using questions such as "Who?", "What?", "Where?", "When?", and "Why?" as key words. Phrases were elicited from the pupils and the teacher recorded them on the flipchart. Finally the pupils created their own story maps in preparation for writing their version of the story on the following day. I noticed that the classroom displays were choc-a-bloc with posters, sentences, flashcards, homonym lists, word walls, and samples of the pupils' work in different genres were on display. It was evident that the teacher had prepared the room quite

deliberately to encourage and assist the pupils to write in as independent a manner as possible. One pupil told me that "I like writing stories. If I get stuck I just look around the room to see good words."

As the *First Steps* programme is newly introduced to the school, the teachers had not yet formally assessed its impact. However, they were very hopeful that the work would be successful. As one teacher told me "You have to give things a while to see results."

Teaching the novel

Wanting to keep the sixth-class pupils interested in reading, the home-school-community liaison (HSCL) teacher, assisted by the other teachers, introduced a shared parent and child reading project. The aim of the programme was to encourage the senior pupils to enjoy reading and to involve their parents in the process. Following discussion with the pupils, one novel was selected for the parent and child project and multiple copies of the novel were purchased. The project was planned to run over a six-week period and an appealing booklet, *Student with Parent Book Reading Programme*, was written to support the work. The booklet contained a wealth of language games, word chains, puzzles and proverbs. At an information session in the school, the pupils and their parents were instructed on how to work together in completing the various tasks over the six-week period. The HSCL teacher also involved the local library services. The pupils made regular visits to the library and the librarian visited the school to talk with pupils, parents and teachers and to support them in their work.

One pupil explained the success of this collaboration to me as follows, “We get more help and attention in the small groups. I like hearing other people’s opinions in the group. When you hear other opinions it helps you improve your own.”

It was intended that all the parent and child activities would complement the teachers’ and pupils’ in-class work on the same novel. During the half-hour in-class session that I observed, four teachers, including personnel from the special education team, worked in collaboration to implement the programme in the classroom. The sixth class was divided into four ability groups, each supported by a teacher. The lesson had four specific phases:

- sharing of summaries
- oral responses
- punctuation and language development
- reading aloud.

During the first phase the teacher and pupils shared written summaries of the previous chapter. The teacher read her summary to the group, modelling best practice, followed by a number of pupils in turn. In the second phase, some of the pupils presented their parents’ impressions and opinions of the content in the completed chapter. During the initial training session, the parents had been requested to provide feedback each evening on the content of the chapter to their children after listening to them read or after reading it for themselves. This phase was quite lively as pupils thoroughly

enjoyed sharing their parents’ opinions. The third phase of the lesson involved a short session on punctuation, and thesaurus work. For the final phase of the lesson, one teacher read the next chapter to the group. Thereafter, the pupils read aloud to their group supported and affirmed by the teacher.

The four phases within the lesson were brief and carefully timed and the pupils remained highly engaged for the half hour. Following the six-week project, a special parent and child ceremony was organised by the school to celebrate their achievements in reading the novel together.

Changes for the pupils

The most obvious change for the pupils is in the quality of their expressive reading, particularly in the sixth class. The teachers are very pleased with the pupils’ confidence, intonation and expression while reading aloud. It is evident that they are modelling the good practice of the teachers and are eager to read aloud in small groups and for the whole class. The pupils were of the opinion that a lot of their success

was due to the teachers teaching collaboratively in the classroom. One pupil explained the success of this collaboration to me as follows, “We get more help and attention in the small groups. I like hearing other people’s opinions in the group. When you hear other opinions it helps you improve your own.”

The sixth-class pupils thoroughly enjoyed having their parents involved in the shared reading of the novel. It meant a lot to them to have an opportunity to talk about and to share their books with their parents. One pupil described it as follows, “Mammy now knows the story really well and she can help me when I do my impressions and predictions.”

Through the teaching of a specific phonological awareness programme the pupils have acquired a good, solid foundation in their early phonological and literacy skills. They display

and to the small group size. One teacher stated that “Every pupil is given the opportunity to experience success as the content is based on their abilities and each group works at its own level.” The first-class pupils described how they “enjoyed learning and sounding out new words.” They told me that they really liked having different teachers in the classroom. As one child explained “I think more teachers make you smarter. It is great fun writing new words and beating your time in the weekly test.”

Changes for the teachers

There have been a number of changes in the way the teachers work, as a result of the new programmes and teaching approaches. Teachers now seem very comfortable with the concept of working together. One teacher talked about her experience of working with another teacher as

Through the teaching of a specific phonological awareness programme the pupils have acquired a good, solid foundation in their early phonological and literacy skills.

confidence and ability in applying that knowledge to reading and writing words and sentences. The recent results in the *Middle Infant Screening Test* (MIST) are very encouraging. The teachers report that the pupils can now stay focused and on task for longer periods of time during the group-teaching sessions. They attribute this to the varied nature of the work

giving her “an enriched understanding of the curriculum through collaboration.” Teachers now share resources, materials and expertise far more frequently and with better results. They report that one of the greatest benefits has been in the sharing of teaching strategies through planning, observing and reflecting together on shared experiences. The

teaching of the novel was such a success that there are plans afoot to implement it in the fifth and sixth classes in the coming year.

There have been changes in the way the special education teachers go about their work. A learning-support/resource teacher expressed the view that “the collaborative approach to teaching helps them to become familiar with a wide spectrum of pupils in the school and to become more involved in class activities.” It was the opinion of another teacher that “team teaching allows for co-development of ideas, approaches and methodologies.”

Changes have also occurred in the manner in which the teachers plan. The teachers believe that planning is now easier as many of the programmes are very structured and tailored to the needs of specific groups of pupils. This gives clarity and focus to the teachers’ individual planning and their assessment records. Teachers are spending more time on planning collaboratively with their class teams, though they believe that their overall time spent on planning has not increased; it has simply become more productive.

Lessons for others

This study highlights important messages for all concerned with teaching literacy effectively.

Necessity for regular planning opportunities

One clear message comes through from these teachers—regular planning opportunities must be woven into school

life. They believe that they are experiencing success because they take the time to plan. Their collaborative practices have become established because they timetable short planning meetings on a regular basis. Some of these meetings last a mere ten minutes, others are longer, but their impact on the teaching and learning processes is substantial. This commitment to planning together results in consistency among teachers in terms of expectations, approaches and outcomes.

Selection of appropriate learning programmes and teaching methodologies

The teachers are fully convinced that the pupils’ learning can and should improve through high-quality teaching of suitable programmes. They are committed to researching and discussing new programmes, teaching strategies and assessment approaches that meet the particular needs of their pupils. “What works for one school, doesn’t always work for another. We have to start from where our pupils are at,” is their attitude. When they take on any new practice, they build in time to meet together in order to monitor progress and to evaluate its success.

Sharing of good practice

The teachers stress the importance of effective induction and mentoring systems for new staff. Experienced teachers in this school work collaboratively with newer colleagues so that they are inducted successfully in whole-school programmes and teaching methodologies. The experienced teacher acts as a role model for the newer teacher, supporting them during co-teaching lessons, planning meetings and monitoring and

review sessions. Collaborative work practices have brought staff members from mainstream and special education together and have provided them with opportunities to learn from each other as well as to learn together.

Conclusion

One of the reasons that co-teaching works so well in this school is that the management and teachers are open to change and not afraid to make mistakes along the way. They

see the school as a place of learning for themselves and for the pupils. The support provided by more experienced colleagues is invaluable and vital in sustaining the culture of collaboration that exists.

What this school has achieved in improving literacy standards is no mean feat. The pupils' attainment levels are very impressive and no doubt the pupils' own motivation, their parents' support, the dedication of the school staff and the clarity of focus that exists within the school have helped in bringing this about.





Chapter 5

School 4

**Innovative approaches to teaching
Mathematics**

Reflecting on the recent changes, the principal told me that “Many of the initiatives we now have in place were born out of frustration.”



Introduction

What has occurred in this school in the teaching of Mathematics in recent times is nothing short of a complete turnabout. Reflecting on the recent changes, the principal told me that “Many of the initiatives we now have in place were born out of frustration.” Before their changes in practice, the teachers felt that they were working very hard, they were teaching as best they could in the classrooms, but they knew their efforts were not reflected in a corresponding improvement in the pupils’ progress. “I’m no good at Maths,” or “I give up!” were common statements from the young girls in this school as they struggled with their sums and problems. The teachers knew if they continued to teach in the same way, the pupils would continue to get the same results. They made a simple decision—to focus on improving the attainment levels of pupils in the lowest quintile in standardised tests. In doing this well, they hoped to raise the standards of achievement across all class levels and develop positive attitudes to Mathematics among the pupils. Since then, the teachers have not looked back. They have introduced comprehensive screening, assessment and whole-school review processes; they extended their co-operative teaching approaches; they developed home-learning programmes; and they introduced a wider range of mathematical resources and games.

School background

The school is located in the suburbs of a large city. It has experienced falling enrolments in recent times due to changes in housing patterns. Many staff members have taught here for

more than a decade and have worked in a wide variety of teaching roles within the school. They have always had a tradition of co-operative teaching using in-class support from learning-support and resource teachers wherever possible. They value the opportunity to learn from each other and to review each other's teaching.

What is happening in relation to numeracy education in this school?

A whole-school review of pupils' achievement

Following the publication of the Inspectorate's national report *Literacy and Numeracy in Disadvantaged Schools* (2005) the principal initiated a whole-school review of the assessment data for all class levels in Mathematics. The data was collated by staff members and presented at a staff meeting. The principal believes that this was a very significant step. She stated, "It was the first time that every teacher saw all mathematics attainment levels across the whole school. The effect was startling. It enabled the staff to take group responsibility for these learning outcomes." Two-thirds of the pupils had achieved well below the national average. The staff became aware from their review of the Inspectorate's report that their pupils' results were not dissimilar to those of many schools serving areas designated as disadvantaged. This realisation was an empowering step for the staff—they realised that their situation was not unique and that they had the potential to make change happen.

To begin with, the principal and teachers decided to examine their assessment processes and developed new approaches

where they found deficits in practice. From then on, they set aside one staff meeting each year for the detailed analysis of the pupils' standardised test results. In particular, they scrutinise results to determine specific trends in achievement at both class and whole-school level. They maintain an ongoing record of the results of each pupil in a *Pupil Screening Test Profile Sheet*. This enables them to build up a picture of each pupil's progress and emerging difficulties. They are mindful of the negative impact that poor attendance has on the pupils' performance levels and include a record of attendance in these profiles. Also, they maintain a careful record of all diagnostic testing completed with pupils who receive learning support in Mathematics. The learning-support teacher commented, "This file is excellent for the information that it gives the support teachers; it is good to see the progress being made over a six-month period and it gives us confidence."

The teachers greatly increased their emphasis on teacher-designed tests and revision sheets. They decided to place a greater emphasis on continuous assessment. They now administer teacher-designed tests at least once a month in all classes. For example, in third class I saw that the teacher gave weekly tests based on the learning objectives for the week. She explained that with the wide ability range in her class, she could not depend on teacher-observation alone to ascertain the level of her pupils' understanding. So, she gives all pupils a weekly revision sheet to check their grasp of the week's work and to establish where individual pupils or groups are having particular difficulties. Following the tests, she gives concise and useful feedback to the pupils on the

accuracy of their responses and discusses with them how well they are doing. The pupils are quite clear about what they must do to improve and are confident that they are getting better.

The teachers effectively use the information they gain from the teacher-designed tests to inform their planning and teaching. In particular, they use the information to help differentiate what the pupils will learn and how they will learn. One teacher told me that she “put enormous effort into planning to ensure everyone is involved and that the work is pitched at different levels.” In one classroom, for example, where the pupils were solving “real” problems using division, the teacher assigned different activities to them depending on their current understanding of the concept. Some pupils were using repeated subtraction to solve problems while others undertook more challenging problems using various division strategies.

Availability and use of mathematical resources

In line with the principles of the *Primary School Curriculum* (1999), the teachers decided to place a stronger emphasis on the pupils as active, collaborative learners. To achieve this they decided that learning with concrete materials had to feature more prominently at every class level, from junior infants to sixth class.

Initially the teachers took an inventory of the existing mathematical resources in all classrooms and support teaching rooms. Compiling these and augmenting them where necessary, the teachers devised an effective system for

the provision of classroom-based kits of mathematical resources. A member of the in-school management team took responsibility for co-ordinating and managing these kits, which the teachers have called *concrete boxes*. Each classroom has a *concrete box*. These very large containers hold excellent materials for the teaching of each strand of the mathematics curriculum. They also contain resources for the creation of mathematics investigation areas. The boxes include equipment such as number fans, timers, coins and place-value cards. Boxes for specific strand units such as length, time, area, weight, capacity with a variety of equipment suitable for the different class levels are also available centrally. The co-ordinator sources equipment, categorises the materials, and prepares inventories. At the beginning of each school year a *concrete box* is delivered to each classroom along with a timetable for the specific strand unit boxes. This timetable is devised in collaboration with the teachers so that they can plan their programmes of work around their availability.

The variety of equipment accessible in each classroom enables the teachers to provide pupils with many hands-on opportunities to reinforce key concepts and skills. In one classroom the children were working on *Number*. They had individual sets of digit cards in zip-lock bags. During the same lesson they used a variety of other equipment such as plastic teddies, domino cards and other practical items. These resources are used on a daily basis in many ways. For example, the teacher of junior infants explained that she often claps or calls out a number and gets the pupils to show the number from the cards in the pack.

Using mathematics games

When the teachers analysed the pupils' responses on the standardised test sheets they found that place value and problem-solving were major stumbling blocks for the pupils. In addition they found that the pupils' transition from second-class to third-class Mathematics was particularly difficult for them. Many of the pupils stated that they found Mathematics really hard and were "no good at them."

The learning-support/resource teacher researched strategies and games that might be beneficially used during mathematics lessons, during activity time and at home with

The staff members decided to extend their practice of co-teaching for this initiative. They planned that two teachers would work collaboratively in every classroom for the teaching of the mathematics games. The teachers began this project with packs containing three specific games: *Snakes and Ladders*; *3 in a Row*; and *Make Ten*. Initially, they introduced these games in three classes of first-class and second-class pupils. The teachers taught the pupils to use specific mathematics strategies and number operations including counting on for addition, skip counting and number combining. Then they encouraged the pupils to use these strategies when playing the three games with their

With each child actively involved, the teachers encouraged them to explore different options and challenged them to come up with different solutions, for example, to work out different ways of making ten using playing cards.

families. The games were chosen for their compatibility with the content and skills outlined in the mathematics curriculum as well as their "fun" value. In particular the games were focused on improving the pupils' understanding of place value and giving them opportunities to solve problems collaboratively. The teachers believe that the introduction of mathematics games has been an innovative and effective whole-school way of improving standards and bringing a sense of fun into learning.

classmates. The pupils were grouped according to ability levels during the games sessions and they were closely supported by two teachers who moved around from table to table giving help and encouragement where needed.

With each child actively involved, the teachers encouraged them to explore different options and challenged them to come up with different solutions, for example, to work out different ways of making ten using playing cards. I found that

the pupils demonstrated an impressive command of the relevant mathematics language and clearly enjoyed the games. “We love learning with these games; it’s just like playing and having fun with your friends,” stated a fourth-class child enthusiastically.

From time to time, the teachers renew and update the packs for each class level, gradually introducing new games that provide just enough difficulty to keep the pupils challenged while still having fun.

The teachers have prepared the following games for use with third and fourth classes:

- *4 in a Row* (consolidates multiplication tables)
- *Less is Best* (place value)
- *Snakes and Ladders* using bigger numbers (counting forwards and backwards, and number square work)
- *Número* (breakup of numbers using different operations)
- *Take 10* (bonus points are awarded for using multiplication and division).

Involving parents in Mathematics

The home-school-community liaison (HSCL) scheme is long-established in the school and very close links are established with the parents and community. The principal told me that

the staff members “don’t plan anything now without developing a home-learning strand to it. Our links with home are fostered from the beginning of schooling.” For example, the HSCL teacher invites the parents from the *Early Start* pre-school programme to come to an information meeting before their children transfer into junior infants. At the meeting, she gives them ideas on how to support their children’s learning in all areas including Mathematics in preparation for attending the “big school” in the autumn. She also outlines the various parent and child support programmes and activities that will occur over the following year. All programmes and activities are planned one year ahead of delivery so that the relevant teachers, parent-support groups and support agencies can plan for their participation. Care is taken that all parent and child activities are spaced out over the year so that demands on parents’ time are reasonable. The HSCL teacher visits the homes of any parents unable to attend meetings and outlines for them what is happening in the school.

Two of the parent and child programmes that occur in respect of Mathematics are *Paired Maths* and *Maths for Fun*. *Paired Maths* is an eight-week programme which involves the mainstream class teacher teaching the pupils how to teach their parents a specific range of mathematics games. When

All programmes and activities are planned one year ahead of delivery so that the relevant teachers, parent-support groups and support agencies can plan for their participation.

the pupils can play these games with confidence, their parents are invited into the classroom so that their children can instruct them on how the various games are played. From then on the pupils bring home one mathematics game each week to play with their family. *Maths for Fun* involves parents coming into the classrooms for a half-hour each week for six weeks to play games with groups of pupils under the guidance of the class teachers.

The teachers are very positive about the benefits of organising these shared mathematics opportunities for the parents and the pupils. “The children get a great kick out of showing their parents how to play these games and the parents derive tremendous enjoyment from the experience,” remarked a teacher. It is evident from the weekly comment sheets that the parents complete that the games are played at home for much longer than the requested ten minutes. These school-based and home-based activities have also helped to build up the collaborative-teaching approaches among teachers, who work together during the class-based sessions. The teachers and the pupils believe that these games have brought the fun back into teaching and learning Mathematics.

Mata

Mata, the *Maths Recovery* programme supported by the Department of Education and Science, has recently been introduced into this school. When I visited, a teacher had been trained as a *Maths Recovery* tutor and had been working in this role for a number of months. This intervention supports the lowest-attaining pupils in senior infants. The

pupils receive intensive, individualised teaching to enable them to advance to a level at which they are likely to learn successfully in their regular class. The first step of the intervention requires a detailed assessment of each pupil’s knowledge of *Number* and the strategies they may have learned already. The assessment results provide specific and detailed guidance for the teacher in addressing each pupil’s specific areas of weakness. Although it is still in its roll-out phase, the teachers report that they are greatly assisted by the diagnostic nature of the programme and that consistent improvements in the pupils’ learning are evident, even at this early stage of its implementation.

Changes for the pupils

The most obvious change for the pupils is that they are having fun while learning Mathematics. Their enthusiasm can best be summed up by one comment from a pupil in fifth class: “I never knew that I was this good at Mathematics.” During lessons I found that there was a high level of participation and activity underway. The teachers ensure that a balance is maintained between whole-class instruction, group-based tasks and activity-based learning. This has resulted in high levels of engagement by the pupils who thoroughly enjoy tackling new problems in pairs and groups or settling down to play games together. The teachers have also noted that the pupils use many strategies when tackling new problems. They are pleased that their efforts to teach a wide variety of mathematics strategies are impacting on the pupils’ responses and efforts.

Yet, as is common when new practices are introduced, the teachers were initially disappointed with the overall standardised tests results at the end of the first year. They believed that the small improvements were not reflective of the huge efforts of the staff and pupils. However, more experienced staff members reminded teachers that this was a natural part of the process of school improvement. They stressed that when new practices were introduced there is often an implementation dip, as the impact of the changes does not have time to be reflected in test results. This motivated the teachers to take a closer look at the results for individual pupils, particularly those in the lowest quintile, and they compared them to results from previous years. This close analysis revealed that pupils in each class grouping had improved slightly in their percentile rank and STEN ratings. The challenge for the school now is to sustain an incremental improvement, slowly but surely, over time in all class levels as well as for individual pupils, where possible.

Changes for the teachers

There have been major changes for the teachers in terms of their whole-school assessment approaches, their use of equipment and games, and the promotion of collaborative learning opportunities. The teachers agreed that looking at mathematics results across the school had a positive impact on their work. By analysing the data available from standardised tests the teachers have been able to look at

specific trends in the school and to address them on an individual as well as a collective basis. Another change occurred in how the teachers tested the pupils' knowledge. Every teacher now carries out a test at least once a month to find out what has been taught successfully and where the gaps are. The teachers credit the practice of regular in-class testing with helping them to identify and remediate problems or difficulties at an early stage.

The biggest change for teachers has been in their approach to getting the pupils to use mathematical equipment and resources consistently. The teachers believe that they have fundamentally changed their attitudes to the use of resources and now encourage the pupils to use mathematical equipment as much as possible throughout lessons. This has been a significant change of practice in the senior classes and has been very successful for the consolidation of concepts and in promoting the pupils' enjoyment of lessons.

The use of mathematics games has been a great success for all involved. It has helped to provide a focus for the teachers in their teaching of specific number strategies. There is now a lively, interactive atmosphere in the classroom when the games are underway. It has also been an effective way of encouraging parents to come into the school and to work with their children. Many pupils commented on the fun they had when they brought the games home to play with their families.

The teachers find that these short-term programmes play a helpful role in promoting positive attitudes towards Mathematics and in reacquainting many parents with the fun of playing games with their children.

Lessons for others

This study highlights important messages for all concerned with teaching Mathematics effectively.

Concrete materials

The teachers are aware that active learning and hands-on approaches are essential at all class levels to enable the pupils to understand mathematical concepts and skills and to reinforce their application. The teachers introduced kits of resources to ensure easy access to a wide range of equipment in all classrooms. They developed a mathematics-friendly environment through posters, mathematics trails, mathematics corners and displays. They have encouraged the pupils to use the available resources throughout lessons.

Mathematics games

The teachers believe that the use of appropriately chosen games is an excellent way to develop positive attitudes to Mathematics for all concerned. In particular, they provide valuable opportunities for pupils to develop and apply their mathematical skills in an enjoyable, social manner.

Team teaching and in-class support

The teachers firmly support the development of team-teaching approaches across the school. For them it has been an enjoyable and rewarding process. They spoke about the importance of preparing and planning together when a new programme is introduced. When teachers are open to working together in the classroom and planning collaboratively the results can be highly effective.

Continuous assessment

The teachers understand that pupils need regular revision and consolidation activities to help them retain and apply their mathematical skills. The teachers make use of ongoing assessment. They use revision sheets at least once a month and in many instances once a week. They analyse the completed revision sheets for patterns of errors and use this information to differentiate the teaching and learning in their classrooms.

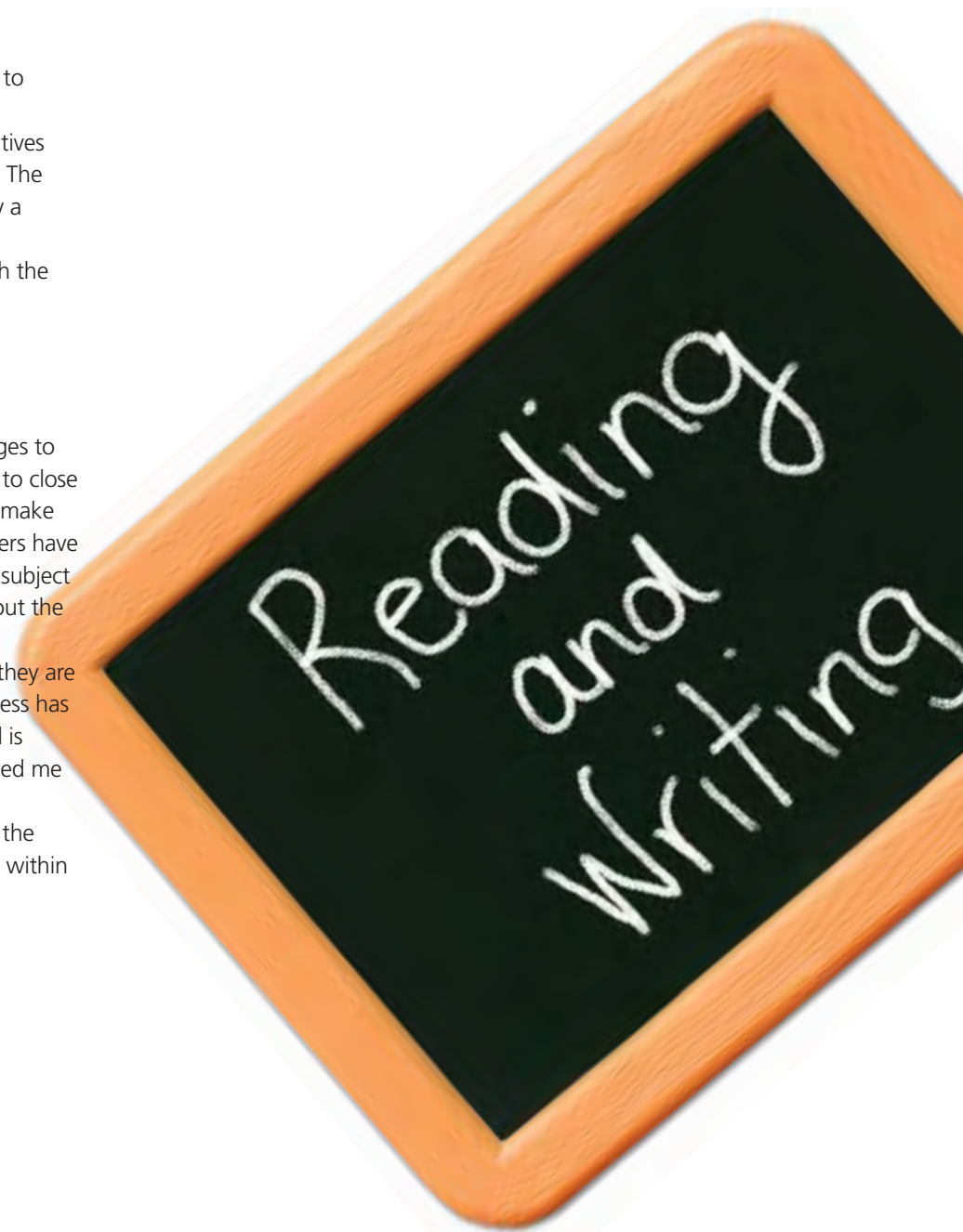
Home-school links

In this school the teachers always plan a home-learning strand for any innovation they develop. They believe that

parents want and need guidance in order to be able to support their children's learning at home. *Paired Mathematics* and *Maths for Fun* are two of the initiatives they have put in place for parents and their children. The teachers find that these short-term programmes play a helpful role in promoting positive attitudes towards Mathematics and in reacquainting many parents with the fun of playing games with their children.

Conclusion

The teachers have introduced many significant changes to their teaching of Mathematics. They are determined to close the achievement gap for all pupils and they want to make hard things easier for their pupils. To date, the teachers have managed to turn around the pupils' attitudes to the subject and have raised the profile of Mathematics throughout the school. The pupils are happier in their learning of Mathematics and the assessment data indicate that they are becoming more successful in that learning. This success has not been dramatic but slowly and steadily the school is moving in the right direction. As one teacher reminded me "Nothing breeds success like success." It will be very interesting to watch how this school progresses into the future as there is certainly great potential for success within its staff and pupils.





Chapter 6

School 5

Leading success in reading

While the principal guides and supports all initiatives in the school she allows other staff members to manage the changes and gives them the freedom to try out new ideas.

Introduction

On the outside this junior co-educational school looks large and austere with staff cars providing the only real colour in a sea of tarmacadam. Having learnt, however, to never judge a school from its exterior, I hoped on entering the building to discover more promising news. I was not disappointed. Inside, I found staff members who worked cohesively, planned carefully and were determined that their pupils would do well. You sense this in the staffroom and you see it in the teaching and learning practices in the classrooms.

The teachers are truly committed to improving teaching and learning. They are merging tried and tested methods with new strategies to create the most effective learning situations for their pupils. Recently, they have implemented a number of programmes which have successfully raised literacy standards for their pupils. They have selected these intervention programmes with great care and introduced collaborative teaching approaches to enhance their implementation.

During my visit, I focused on those aspects of literacy teaching that have been particularly successful. I especially wanted to learn about how the school implemented the English

curriculum and how its multi-sensory approach to phonics—a programme devised by a staff member and commercially available³—worked.

School background

This school has an enrolment of almost 400 pupils with newcomer pupils making up one-fifth of the enrolment. It is located approximately three kilometres from the city centre and provides for pupils from a wide catchment area. There is a large special education team which includes supplementary teachers for learning support, resource teaching, language support, and two classes for pupils with speech and language disorders and one for pupils with hearing impairment. There is also a home-school-community liaison teacher. The special education teachers meet regularly to discuss their work and to plan together. They are keen to share their ideas, resources and approaches with the mainstream teachers.

The school has a strong culture of distributed leadership—the principal delegates responsibility for key tasks and the teachers enjoy taking on these leadership challenges. While the principal guides and supports all initiatives in the school she allows other staff members to manage the changes and gives them the freedom to try out new ideas. She facilitates teachers in meeting to collaborate and plan together on a regular basis.

The board of management has recruited staff members who have enriched the school through their diverse backgrounds, talents and personalities. The teachers are very enthusiastic

about what they do and they give generously of their personal time. They are willing to share their expertise and are interested in continuous professional development. Some staff members have trained as *Reading Recovery* tutors while others have undertaken or are undertaking post-graduate courses. The teachers share new knowledge with each other at staff meetings, in their planning meetings and through their collaborative teaching practices.

What is happening about literacy education in this school?

School development planning

The principal is convinced that the school development planning process is critical to success and she prepares well ahead of time for planning days. Following initial discussion with her staff, the principal liaises very closely with any facilitator from the support services in agreeing the priorities for each planning day and in setting out a workable agenda. The staff is encouraged to think about and discuss the planned agenda ahead of the planning day so that informed decisions can be made and future actions and targets set out.

In recent years, the school staff planned for a number of specific literacy programmes as part of its overall English plan. The staff has detailed common approaches for the teaching of reading and other literacy interventions and included exacting direction as to what literacy activities will be undertaken and when. In fact, the plan is so highly structured that one teacher stated to me, “It takes the mystery out of what to do, how to do it and even tells you how to check

3 The Newell Literacy Programme

that you have done it correctly.” The plan also clearly details the assessment approaches for each class level. Of course, planning to do something and actually doing it are two different things. Fortunately in this school what is planned on paper gets implemented very well in practice. The principal believes that planning, especially in larger schools, must be recorded precisely as without specific written commitment there is too much opportunity for confusion and dilution of the original intention.

Whole-school phonics programme

A staff member with more than thirty years’ teaching experience has created and developed the multi-sensory programme that is an important element of phonics teaching in the school. The programme includes teaching manuals, a range of teaching materials including charts, photo-copiable books, flashcards, and a teaching tutorial video. The programme provides pupils with many of the basic skills and the complex rules involved in reading and writing. The programme focuses on building up the learners’ knowledge of letters and groups of letters along with their associated sounds. It emphasises the importance of using visual and auditory cues.

The phonics programme is taught by the mainstream class teacher every day in all junior classrooms for at least fifteen minutes. Each lesson follows a similar format, beginning with the revision of previous letters and the introduction of a new letter and its sound. Each letter or combination of letters and the corresponding sound is revised using flashcards and familiar phrases, for example “w says w as in wind.” The pupils then repeat this phrase after the teacher. Each letter

and corresponding sound also has a specific action. For example when reciting “f says f as in fish”, the teacher mimes a fish moving and this action is mimicked by the pupils. The teachers play a variety of games to reinforce the work and to make the process enjoyable. One pupil told me that she liked the phonics lessons because “We do it the same way every day. If I don’t get it all one day I can get it the next time.” As the pupils make progress from letter and sound association to word formulation, they then begin to write short simple sentences on their own or in dictation. A fresh aspect of the programme is the inclusion of lots of nonsense words along with regular words for reading and writing.

In senior infants, the pupils focus on reading words and I observed the teacher present various cards to the pupils each with black and red coloured letters. She “sounded out” the letters rapidly to produce the word. The pupils repeated what she said and explained the reason for the teacher using two colours within each word by chanting “the red ones are the vowels, the black ones are the consonants.” They also responded to the teacher by clapping to a consonant and clicking to a vowel.

I found that the senior-infant pupils succeeded in producing c-v-c words enthusiastically. During the writing phase of the lesson, the teacher drew a letter on a flip chart while saying its name. The pupils traced and wrote the same letter while also saying its name. Later in the lesson, the pupils were asked to write individual letters or groups of letters, real words, nonsense words and a number of dictation sentences. In this manner, the pupils revised earlier work and consolidated their learning.

To ensure that there is consistency of approach and assistance available when needed, one teacher has responsibility for overseeing the implementation of the programme.

The lesson format is followed in every classroom and the teachers feel that they have all benefited from having undertaken specific school-based training for the delivery of this programme. They stressed the importance of every teacher knowing how to structure the lessons and consistently teaching all aspects of the programme, including the correct pronunciation of letter sounds. To ensure that there is consistency of approach and assistance available when needed, one teacher has responsibility for overseeing the implementation of the programme. The teachers attribute much of the pupils' success in standardised tests to their consistent implementation of the programme in every classroom.

Intensive literacy lessons

The teachers realise that the secret to nurturing their pupils as successful learners lies in preventing failure at an early age. With early intervention in mind, they plan for and deliver intensive literacy lessons in senior infants and in first class. The progress of all senior-infant pupils is assessed using the *Schonell Graded Reading Test* and the *Middle Infant Screening Test* (MIST) in addition to a review of the pupils' achievement in teacher-designed tests and teacher observation notes. Using this data a team of teachers—the

class teacher and two or three special education teachers—plans and delivers an intensive in-class support programme. The intervention programme addresses specific aspects of literacy, including reading, phonics, letter formation and personal writing. Lessons are conducted for thirty minutes every day for six weeks. The pupils are divided into groups according to ability and concurrent literacy stations occur in the classroom with one teacher teaching at each station. The teachers move from station to station during the sessions and activities are highly structured and differentiated to suit the specific needs of each ability group. The sessions are intense and focused: not a moment is wasted.

Each thirty-minute lesson incorporates the following five activities:

- Phonics: The pupils sort letters rapidly, making and breaking words using magnetic letters, and analysis of onset and rime patterns
- High frequency words: The pupils compose and write simple, common words using small chalk boards
- Writing: The pupils compose sentences based on their experiences or on pictures provided as a stimulus

- New reading: A new book is introduced each day at a level appropriate to the pupils' ability. The pupils read this book using specific word-attack skills, cues and strategies. They bring home the book every night and the following day it becomes their familiar reading source
- Familiar reading: The child reads the previous night's book to the teacher. The teacher maintains a record of the child's errors while reading. Common or frequent errors inform the content of micro-reading lessons.

At the end of the six-week programme the pupils are assessed on their ability to read and write high frequency words, compose sentences and on their knowledge of

organisation, and the good quality of teaching that make these sessions a success.

Whole-school approach to the teaching of reading

The school policy for English reading is a very useful document. It clearly outlines for the teachers what targets the pupils are expected to achieve in reading at each class level. These targets, aligned to the content objectives of the English curriculum, are listed alongside the resources, materials and methodologies which will enhance teaching and learning. Specific reading programmes are set out, with details of the reading activities to be conducted at each class level. For

From time to time the teachers rotate their in-class activities and in this way they gain a chance to develop their skills in implementing different aspects of the programme.

phonics. Each pupil's progress in reading their supplementary reading material is closely monitored and recorded. Assessment, conducted before and after the implementation of the programme, indicates very positive learning gains for the pupils.

From time to time the teachers rotate their in-class activities and in this way they gain a chance to develop their skills in implementing different aspects of the programme. Overall, I believe that it is the careful planning, efficient classroom

example, the second-class reading programme sets out the specific reading skills to be taught and the literacy activities to be conducted each term. The reading programme includes four distinct reading activities: shared reading with parents, teacher modelling the reading process; library sessions and *Drop Everything and Read* (DEAR) time. In the first term the plan stipulates that the pupils engage in reading activities with their parents. During the second term, the teacher will use real books (sometimes referred to as teaching the novel) as the basis for teaching reading. All through the year the

teacher is expected to model the reading process in structured reading sessions. Other activities such as DEAR and library sessions are to be conducted on a regular basis.

The specific literacy skills to be developed are detailed for each reading activity and include vocabulary identification, sequencing, contextual analysis, story-reviewing and comprehension exercises. The teaching approaches are also outlined in the policy, for example, in term two the second-class teachers in using the novel will use similar approaches including differentiated novels for the various ability groups and will use a print-rich environment to promote the specific vocabulary of books for example title, index, blurb, chapter, paragraph, prologue and epilogue.

In most instances the teachers' work is very consistent with the written policy. One teacher informed me that "From time to time there are bits of the plan that I think should be changed but we have agreed to implement the programme as we planned it and we will only change it as a group." In my visits to the classrooms I found that reading lessons followed a particular format. Usually the lesson begins with phonics activities where the teacher goes back over the phonics work covered during the previous few days including sounds, blends and the identification of vowels and consonants. Then the teacher and the pupils discuss the reading material for the lesson. The teacher concentrates on the context of the text and on helping the pupils to master any new words. The pupils point out unknown words on their page and, prompted by the teacher, they use phonemic, syllabic and contextual clues to help identify the new words.

They clap out syllables and click to each word's vowels. After engaging in this multi-sensory approach for a few minutes, the teacher clearly introduces the new words and phrases on flashcards and asks the pupils to repeat the words several times. Usually the teacher uses a familiarisation game such as *Guess the Word*. For this game a group of pupils stand facing away from the class while flashcards are pinned to their backs. Other pupils call out clues to help them guess what is on the flashcard. The clues relate to the size of the word and the number of consonants and vowels. Following the games, the teacher and pupils talk about the illustration that accompanies the reading text and are encouraged to use the new words to do so.

During the next phase of the reading lesson, the pupils read the text aloud and the teacher encourages them to be observant of their pace, tone and expression in order to communicate the content of the text. The teacher models reading to help the pupils to read more accurately and fluently. The teacher conducts mini lessons on points of grammar, punctuation or language enrichment as the need arises. Finally the pupils play a game, perhaps *Word Bingo* or *Snap*, and the new words form the basis of the game. The pupils are assigned a section of text, usually a page, each night to practise their reading skills at home.

Changes for the pupils

There have been a number of significant changes for the pupils as a result of the whole-school implementation of a specific phonics programme and the adoption of a common

approach to the teaching of reading. The pupils have a good foundation in letter and sound associations and can use a range of specific word-attack skills to read new, unfamiliar words. Over the last seven years the standardised test results reflect a marked improvement in the pupils' reading levels. In particular, the MIST results show an impressive level of competence among the senior-infant pupils in recognising

In fact, most of the pupils that I asked told me that they were very good at reading and probably wondered why I was asking about such a given fact.

letters and in writing words independently. The pupils are enthusiastic about their supplementary reading material and enjoy bringing home their new books each night. As these books are carefully graded, each pupil is given a book that they can read independently. This has been particularly rewarding for the lower-achieving pupils. One senior infant told me confidently that she had "read lots of books now and was getting better at reading." Another pupil told me that "reading was the best thing in the school." In fact, most of the pupils that I asked told me that they were very good at reading and probably wondered why I was asking about such a given fact.

Changes for the teachers

As a result of the whole-school approaches to teaching the various literacy programmes, the teachers have found that they now spend more time on formal reading instruction. They have found that the pace and delivery of their lessons have improved and they more fully appreciate the value of their input time. They spend a significant amount of time explicitly teaching and have established useful classroom management routines to protect that time.

Reading lessons are more engaging and involve a multi-sensory approach. The teachers find many different ways to teach using visual, auditory and physical cues. They use word games and phonics activities, flashcards to teach letters and introduce new words and facilitate lively discussion. They work with other teachers in the classroom and intensively with small groups of pupils. Such work practices provide an excellent insight into the pupils' particular strengths and needs.

Teachers now use assessment data to closely determine what the pupils' learning targets are. For example they use daily phonics worksheets to assess the pupils' progress and use this information to pitch the following day's lesson. During the intensive literacy sessions the teacher keeps a running record of each pupil's reading. Although regular, standardised testing is carried out at all class levels, the teachers place equal emphasis on their own forms of ongoing assessment.

Many teachers told me about the satisfaction gained from working collaboratively in planning for and implementing the various literacy programmes.

A very significant change for the teachers is that they no longer work in isolation in their classrooms. They are now quite open to having other teachers in the classroom with them. The team of special education teachers, greatly augmented in recent years, plays a significant role in developing intensive intervention programmes and in co-teaching them in the mainstream classrooms. Many teachers told me about the satisfaction gained from working collaboratively in planning for and implementing the various literacy programmes. They are convinced of the value of co-teaching and one teacher summed it up well by saying “the collaboration and the sharing of ideas and experiences have breathed new life into the school and are key factors in our success.”

Lessons for others

The work in this school highlights important messages for all concerned with literacy teaching.

Whole-school implementation of literacy programmes

The teachers are convinced that sustained school improvement will only take place when joint decisions are

implemented on a whole-school basis. Together, to this end, they have devoted time and effort to choosing programmes for specific aspects of literacy that meet the needs and abilities of their pupils. The teachers believe that whole-staff discussion and agreement about the teaching approaches to be used and how to assess the success of the pupils’ learning is critical. To promote any new endeavour they assign a named teacher to facilitate and monitor implementation.

Planning for success

The teachers agree that good planning makes for good teaching. To ensure consistency of practice, they feel that all schools should document the exact programmes, methodologies and assessment approaches to be used at each class level. This should include detail regarding aspects such as phonological awareness, phonics, spellings, comprehension strategies, vocabulary enrichment as well as different reading activities and contexts such as the novel, library reading and shared reading opportunities.

Co-teaching in the mainstream classroom

The teachers have used co-teaching approaches for literacy for many years. They recommend that schools consider co-teaching and try out a variety of models. The most important thing is that the programme covered should be highly

structured and based on the needs of the pupils. The teachers believe that it is very important for teachers who work together to debrief regularly as it is important to refine the shared practice as they go along. Teachers must tell each other when they could be doing something in a better way and take the opportunity to learn from each other.

Conclusion

The whole-school emphasis on smart preparation and planning, the use of structured literacy programmes for early intervention and the teachers' willingness to learn from each other make for a highly successful school. The pupils' attainment in literacy is good and the teachers intend to improve on this even further. The management and staff are aware of the fine work that they are doing but are anxious to do better and set the bar a little higher each year for themselves and for their pupils. As one of the younger teachers told me "I feel privileged to work here because I am learning so much." This is high praise indeed for any school.



The background features a collage of overlapping geometric shapes, primarily triangles and quadrilaterals, in shades of pink, white, and yellow. Large, stylized green letters are scattered throughout. Numbers are placed at the vertices of the shapes, such as 10, 20, 3, 17, 14, 15, 19, 5, and 2. The overall aesthetic is mathematical and vibrant.

Chapter 7

School 6

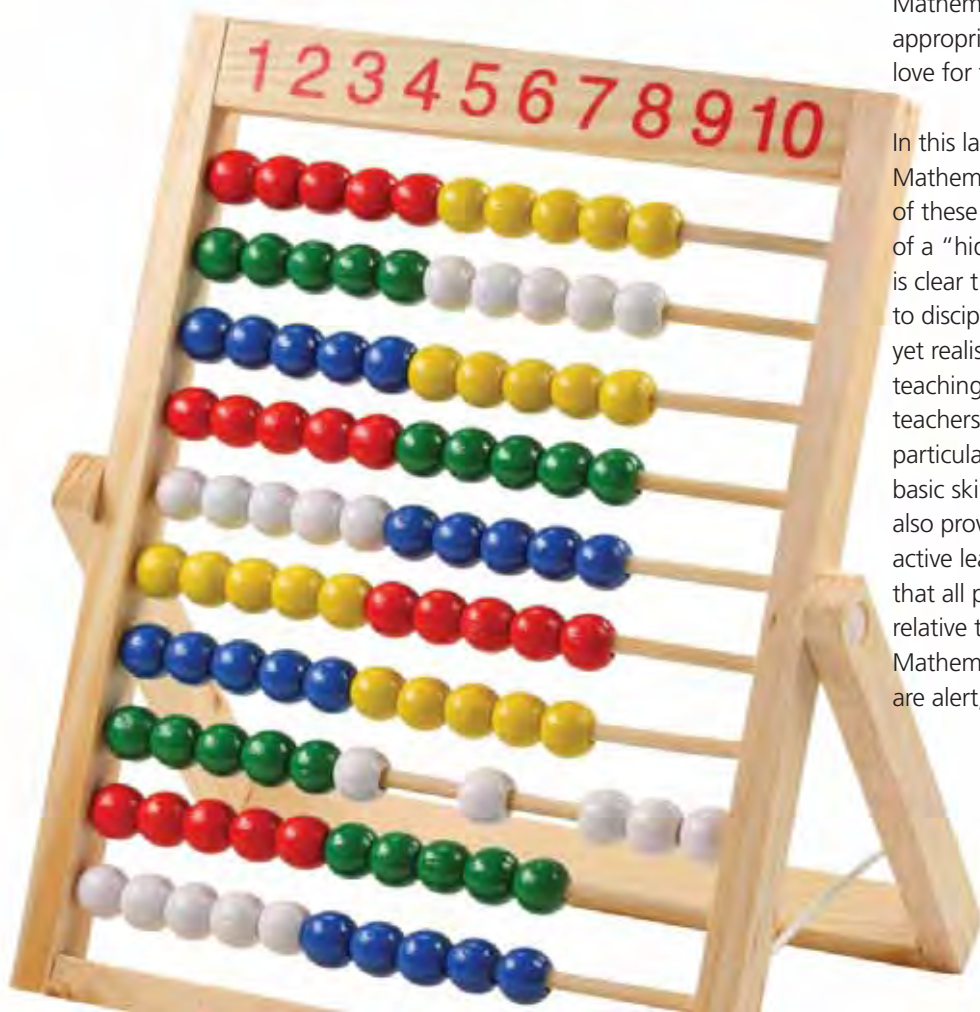
**Meeting the mathematics
challenge**

It is clear that the teachers in the school have a positive approach to discipline and a commendable work ethic.

Introduction

Very few teachers would dispute that teaching Mathematics well is challenging. Teachers have the support of the mathematics curriculum to guide them in this challenge. The curriculum envisages that each child will access a broad mathematical programme and gain mastery of mathematical skills that relate to solving real-life problems. However, teaching Mathematics effectively requires somewhat more than an appropriate curriculum—it requires creativity, enthusiasm and a love for the subject.

In this large primary school for boys, the teachers teach Mathematics well. Many elements contribute to this fact. Some of these elements are readily describable while others form part of a “hidden curriculum” that can only be speculated upon. It is clear that the teachers in the school have a positive approach to discipline and a commendable work ethic. They have high, yet realistic, expectations for their pupils. Traditional and new teaching methods are combined with ease and confidence—the teachers have picked what works best for them in their particular context. The teachers emphasise the teaching of basic skills and the memorisation of number facts (tables) while also providing the pupils with worthwhile experiences for active learning and discussion. They work very hard to ensure that all pupils experience an appropriate level of success relative to their needs and abilities. These teachers like Mathematics and enjoy teaching the subject. In turn, the pupils are alert, attentive and highly motivated.



This chapter will describe how the school provides its boys with a good mathematics education through a practical approach to planning, a worthwhile emphasis on linkage, reinforcement and revision across the strands of the mathematics curriculum, a concerted approach to problem-solving, and the meaningful support of parents.

School background

A number of factors set this large, urban boys' school apart. First, the school has a very steady enrolment and the boys' attendance levels are impressive. The management and staff attach considerable importance to ensuring that the boys come to school each day and go out of their way to make this happen. Most of the present junior infants have attended pre-schools in the area, with the majority coming from the *Early Start* programme in the adjoining girls' school. Secondly, high standards of behaviour are expected of the boys: they are actively encouraged to care for and support one another, in class, at breaks and during recreation periods. The boys develop good collaborative work habits through play, sport, and class-based, group activities. Thirdly, a strong tradition of music and sport is cultivated in the school. The teachers believe that the boys' active participation on the sports field and the acquisition of musical skills helps to enhance their self-esteem. The teachers are unanimous in their belief that in fostering the boys' self-esteem, they are nurturing the boys' attitude to learning, particularly in the critical areas of literacy and Mathematics. Finally, there is a low turnover of staff in the school—teachers stay here.

The teachers receive a lot of professional and financial assistance from the board of management. The board endeavours to facilitate the teachers, as much as is possible, to attend courses or avail of professional development opportunities that are directly relevant to their work in the school. It ensures that available funds are set aside for the purchase of up-to-date resources and reference materials so that the teachers can adopt new strategies or improved methodologies in the classroom. In short, the board wants highly effective learning experiences for the pupils and it encourages and supports the teachers in teaching as best they can.

What is happening in the school in relation to the teaching and learning of Mathematics?

A whole-school approach to teaching Mathematics

The teachers believe that for teaching to be effective there must be whole-school approaches to the teaching of Mathematics. This is the foundation of the successful work going on throughout the school. Teachers from each of the four class group levels meet regularly to plan together. Over the years they have identified and worked together on a number of important areas that they feel require whole-school consistency. They have agreed on common approaches to oral Mathematics, the correct and consistent use of mathematical language and operations, the memorisation of number facts and clarity around the teaching of place value.

The school plan outlines a whole-school approach to many aspects of the teaching of Mathematics. There is consensus on assessment approaches, oral work, and the use of guided discussion, activity learning, linkage across the strands of the mathematics curriculum and integration across all the subject areas of the *Primary School Curriculum* (1999). It is also clear that the school plan directly informs each teacher's own individual planning, both long term and short term. But most importantly, the school plan guides the teachers' classroom practices, from infants through to the senior classes. It is obvious that these teachers are not planning for planning's sake but are committed to making teaching and learning better across the school as well as in individual classrooms.

Linkage and revision

A major goal for the school staff is to help the pupils become confident in their own mathematical abilities. In each classroom, the teachers use practical activities for linkage and revision to ensure that the pupils can use their skills with confidence. The teachers emphasise the importance of linking all strands of the mathematics curriculum. So during all lessons, the pupils learn how the strands are interrelated and they are encouraged to use their knowledge of one area of Mathematics to consolidate and revise another.

In an infant classroom, the teacher explained her approach to linkage and revision as "trying to link as many strands as possible each day. I get the children to do some work on *Number, Measure, Shape and space*, and maybe even recording data on a daily basis." In her classroom, I watched the pupils work with simple two-dimensional shapes. Using

these shapes as a starting point, the teacher carefully consolidated their understanding of *Number* and measurement through skilful questioning. She prepared a range of learning activities that were balanced in terms of practical tasks and written work. In this way the pupils were able to gain a firm grasp of the concepts and skills. The classroom regime was consistent but there was great flexibility of approach to individual pupils. The teacher knew the pupils well and her praise was closely focused and specific to individual pupils. Lessons were briskly paced. She emphasised the importance of hard work and kept the pupils engaged and on task. The pupils were deeply involved in their learning and the teacher took nothing for granted. "Revise, revise, revise!" was an almost audible mantra amid the busy hum of classroom industry.

Every Friday morning along the corridors of the school the boys may be heard reciting their tables, engaging in mathematics quizzes and playing number games. There is an enjoyable buzz in the rooms as boys go head to head, in teams and pairs, vying for their place at the top of the league table. On alternate Fridays, the rooms later become somewhat quieter as the boys settle down to their fortnightly tests armed with pencils, hundred squares, rulers, erasers, and occasionally calculators. These tests include carefully worded, practical problems that are interesting and relevant. As computation operations are seen as tools to solve things the pupils do not get simple strings of addition, subtraction, multiplication or division to complete. Instead, the tests require the pupils to concentrate on how to solve things using computation as a tool. A teacher explained how this

method of testing can give a true insight into the pupils' ability to use Mathematics in everyday situations: "It ensures that the work in Mathematics is being revised and consolidated on an ongoing basis. Most pupils can add but when and what to add are very different puzzles for them."

Targeted learning support for Mathematics

"We work to see that no child will be left behind," stated a teacher. The approach used by the teachers was best summarised by one teacher who said, "We try to find out

simple problems and ensure that they get plenty of opportunities to revise what they know.

One learning-support/resource teacher described how he does his best to make learning as simple as possible for his pupils, explaining "I give them problems that provide them with just enough challenge to use what they know with success." His main aim is to make learning easy. "Keep it simple and keep it relevant," he advocated. This helps the pupils to become confident learners so that they persevere in their work.

It is obvious that these teachers are not planning for planning's sake but are committed to making teaching and learning better across the school as well as in individual classrooms.

what the child knows, or does not know and we work from there." The teachers examine the pupils' results in standardised tests very carefully and their ongoing class work. If they are not making appropriate progress they attend learning support for a period of focused intervention. The learning-support teachers play an important role in identifying the specific areas that are causing difficulty for each pupil. They liaise closely with the class teachers and together they plan joint intervention programmes for the pupils in question. These programmes involve analysing the pupil's grasp of place value, the properties of numbers, the carrying out of operations and number facts. The teachers pay close attention to the exact strategies that the pupils are using to work out

Whole-school approach to problem-solving

The teachers have identified some ways to make problem-solving easier for pupils. First, all the teachers use a common mathematical language and an agreed approach to number operations. They find that this helps to avoid the possibility of pupils becoming confused as they make the transition from class to class or in circumstances where they receive extra support from other teachers. The teachers also encourage the pupils to "talk-out" the steps of computation and problem-solving. Even in the infant classes, the pupils are encouraged to discuss and explain what they are doing and why they are doing it.

The teachers have agreed that the problems they set for pupils should be practical and related to the pupils' everyday experiences. They use a wide selection of concrete materials and visual aids to help the pupils to solve them. In the junior classes I saw pupils using cubes and shapes, the number line and the hundred square to find answers to simple arithmetic problems. In the middle classes I watched with interest as the pupils set about exploring shapes in the environment using practical, everyday objects and shapes. They showed an impressive level of knowledge about pattern making and tessellation in shapes. The pupils clamoured to answer questions and to discuss the specific properties of shapes.

The pupils were given lots of opportunities to use fraction walls, charts and other visual resources to get to grips with all aspects of fractions.

Fractions were brought to life in the senior classes with practical, paper-folding tasks. The pupils were given lots of opportunities to use fraction walls, charts and other visual resources to get to grips with all aspects of fractions. I noted that when any pupil was struggling with solving a task, he was given extra time and resources to help work out the solution. One teacher explained to me that the pupils "need to be able to experience success. If they don't it's our fault—

we didn't pitch the problem correctly for them." Indeed, I found the teachers to be very aware of the pupils' learning needs and that they did a very good job of matching the learning tasks to the pupils' abilities.

The teachers appreciate that the pupils should enjoy and be challenged by Mathematics. Consequently they link many aspects of the mathematics curriculum to sporting fixtures and the game scores of popular teams. I saw that the pupils in the middle classes could very quickly substitute points and goals in discussing a recent Gaelic football game demonstrating a very good grasp of the three-times tables.

At staff meetings, the teachers have discussed the importance of questioning techniques in Mathematics and most teachers ask good questions—short, specific and focused on the precise sequence of learning. A number of teachers mentioned that some pupils find it difficult to remain with a problem as they become distracted in their learning. To counter this, teachers in some classrooms have begun to use information and communication technologies (ICT) in catering for the different learning needs of the pupils. Some teachers have found that mathematical software based on the *Logo* computer language has been very helpful in keeping the pupils interested and some are showing very good aptitudes for the materials.

Notwithstanding the efforts of all the teachers, there are still some pupils who struggle to solve problems and find it hard to apply appropriate strategies. It is to the credit of the teachers that they make such admirable efforts to build

confidence among the pupils and encourage their curiosity and perseverance.

Bringing parents on board

“Every day counts” is the motto of the teachers in respect of the pupils’ school attendance. They know that the key to success is getting the pupils to come to school, day after day. For many pupils and their parents, this is not so easy, but the home-school-community liaison (HSCL) teacher spends a lot of time working with parents and following up on pupils’ non-attendance. At the moment, the attendance figures are very good, and this success is further encouraged by the school’s participation in a local city council scheme that rewards pupils for good school attendance. All teachers encourage parents to come and talk to them about their children’s progress and every effort is made to accommodate parents’ attendance at parent-teacher meetings.

The school staff seizes every opportunity it can to involve parents in their children’s learning. In December, all parents

receive a list of mathematics games which can be played at home among family and friends and would make for good Christmas gifts for children. Parents are also given a booklet entitled *A Little Help*, which is a short, practical summary of the main elements of the mathematics programme in each class level. Every week, class teachers keep parents up to date about the mathematics topics being covered through information notes.

Through the HSCL scheme, the management and teachers continuously seek to find ways to strengthen the links between home and school. Parents’ courses are organised on a regular basis and in respect of Mathematics, the school runs a *Maths for Fun* programme. This involves training a group of parents to play a selection of mathematics games in the classroom with pupils. Many of these board games are familiar to the parents from their childhood and involvement in the programme proves to be a social and enjoyable experience for the parents and pupils alike.



Changes for the pupils

This school has a long-established culture of teaching Mathematics well. The teachers have clear expectations about what the pupils will learn and how they will learn it. In recent years, in line with changes of emphasis in the primary school curriculum for Mathematics there have been some adaptations to the teaching and learning. The pupils now use more equipment and resources at all class levels. There is a greater focus on letting the pupils be more active in the learning process and in allowing them to work out problems in groups and pairs. The pupils are given ongoing opportunities to work on tasks based on all strands of the mathematics curriculum. The teachers use games, quizzes and the regular learning of tables to keep the pupils sharp and swift in recalling their number facts and applying their knowledge to tasks and problems.

The pupils take great pride in their written work. They have been well trained in recording their work neatly and accurately. One teacher told me that “You get what you expect.” and from my observation of their copies and work folders she obviously expected the pupils to present their work well. The teachers believe that every pupil should experience success. To this end the pupils are expected to be able to talk about their work using a common mathematical language. They are encouraged to approach problem-solving in a systematic way and to persevere even when solutions are not readily available. In turn, the pupils show considerable interest in how Mathematics occurs around them whether it is in game scores, shopping excursions, catalogue ordering, craftwork, or in sharing out sweets.

Changes for the teachers

Good planning and good communication go hand in hand. The teachers make the time to get together to talk about what the pupils need to learn, and how best to teach that. In recent times, they have decided to tackle four specific areas: oral work, tables, mathematical language and place value. They plan together to ensure that there are common teaching strategies in use throughout the school. The learning-support/resource teachers work very closely with class teachers in meeting the pupils’ learning needs. The teachers are mindful of the need to link all learning to relevant, everyday situations and to ensure that the pupils have varied opportunities to apply their skills. They communicate regularly with parents regarding homework and through the HSCL scheme the school successfully encourages parents to become involved in their children’s learning in Mathematics.

Lessons for others

The work in this school highlights important messages for all concerned with teaching Mathematics. The following list includes some aspects of the school’s work that have proven especially valuable.

Classroom management skills

As with every other subject, the teachers firmly believe that good classroom management makes for good mathematics teaching. The teachers manage the pupils’ behaviour skilfully and plan their classroom environments, their time and their provision of study materials carefully. The old rules of

It is clear that parents have been very supportive of the school's drive to improve pupils' attendance in recent years and percentage attendance figures are very good overall.

speechmaking seem to apply well to the teachers' presentation style:

- tell them what you are going to tell them
- tell them
- tell them what you have told them.

Consequently, the teachers make things quite clear for the pupils. Classroom interaction is pleasant and respectful and the teachers use praise well remembering to remark upon a well-answered question, the use of appropriate mathematical language, and acts of sharing.

Attracting, retaining and supporting staff

There has been a very small turnover of staff over the years in this school and this contributes to a certain stability and consistency in teaching Mathematics. Attracting and retaining staff members is a particular challenge for schools serving areas of disadvantage. The school management plays a pivotal role in supporting the staff and attending to their professional development. Their success in retaining and supporting teachers certainly has a positive influence on levels of performance in Mathematics.

Parental support

The teachers strongly believe that parental support for their children's learning at school is vital in fostering a positive attitude towards education. This school enjoys a high level of support from parents and there are good communication channels between home and school. Management and staff understand the importance of reaching out to the parents and their efforts are well co-ordinated by the HSCL scheme. It is clear that parents have been very supportive of the school's drive to improve pupils' attendance in recent years and percentage attendance figures are very good overall.

Effective planning processes

The teachers stress the importance of a clear, well thought-out mathematics plan. This school's mathematics plan directly impacts on the pupils' learning experiences. The plan guides the teachers regarding programmes of work and teaching strategies and they monitor its impact on achievement levels and review it as needs be. The teachers place a high value on their planning meetings. Small groups of teachers meet regularly, often informally, to plan their teaching approaches for their chosen priority areas. These short meetings provide opportunities to discuss their common concerns and share new ideas or resources.

Conclusion

There are many fine aspects to the teaching of Mathematics in this school. These include the practical approaches to whole-school planning and the emphasis on linkage and revision, problem-solving, and the involvement of parents. The old mantra of “revision, revision, revision” is complemented by a variety of assessment approaches such as teacher-devised tests, textbook checklists and standardised tests. The teachers are committed to using assessment to improve learning rather than to rate a pupil’s performance in relation to his peers. Above all, they want the pupils to be confident and competent in using Mathematics in their everyday lives and I believe that they are making considerable headway in realising that goal.





Chapter 8

School 7

A head start in early language
and literacy skills

What is especially significant here is the way in which changes have been enacted simultaneously at organisational and classroom levels to improve the standards of literacy throughout the school.

Introduction

Walking into certain schools, you get a sense within seconds that you have arrived somewhere that bit better. It may be a cheerful greeting that enlightens you or the eye-catching displays, a snatched conversation at a classroom door or perhaps a happy pupil skipping down a corridor! After many years working in schools, you tune in immediately and just know when you are somewhere special.

This school is a place where the teachers persistently strive to improve the quality of their pupils' learning. What is especially significant here is the way in which changes have been enacted simultaneously at organisational and classroom levels to improve the standards of literacy throughout the school. The changes have been worthwhile and the overall improvements in literacy are noteworthy. Good whole-school planning, astute leadership and open communication are among the elements that make this school successful. Additionally, well-thought out models of teaching and differentiated learning experiences make the experience that bit better for the pupils who come here.

During my visit, I learned about some of the effective programmes and teaching strategies used to develop the early language and literacy skills of the pupils. These include planning and teaching collaboratively, the *Book Start* reading initiative, a developmental oral language programme, structured and free play sessions, and the use of assessment for learning.

School background

This junior school has a bright, attractive interior with colourful, educational displays. Outside, a new sensory playground takes pride of place in the central play area. The creation of this playground epitomises the “can do” culture here—if something is worth doing, it’s worth doing well. There has been a significant increase in enrolment in recent years and this trend looks likely to continue. Many of the pupils attend the breakfast and lunch club in the canteen of the senior school on the same campus. The school incorporates a pre-school and a speech and language class.

There are a large number of assigned special education teachers on the staff. In order for all teachers to have the opportunity to teach in the mainstream setting and in support roles, the principal and the board facilitate a workable arrangement for staff rotation. This arrangement promotes continuous professional development and co-learning among the teaching staff. It also contributes to the co-operative working environment, the willingness to contribute to and accept new ways of doing things, the atmosphere of joint responsibility, and the teachers’ belief that they make a

significantly positive impact on the lives and futures of the pupils they teach. The principal is ever mindful of her role in developing the internal arrangements and systems that are critical to supporting the staff. She knows that when sensible systems are firmly established the teachers and support staff get on with the job of providing effective learning experiences for all the pupils.

What is happening in relation to literacy education in this school?

Collaborative work practices

There are many opportunities for teachers to plan collaboratively during specific planning meetings and staff meetings. Every year, a timetable is organised for weekly planning meetings at each class level. Additionally, the teachers use their monthly progress records in a mutually beneficial manner. Each mainstream teacher maintains a progress booklet that contains all the monthly progress records for his or her class. The records are submitted each month and an assistant principal reviews the overall work of the school noting overlap or omissions across class levels. At the end of the year, the teachers pass the progress booklet to the pupils’ next teacher. This has proven to be a simple and practical way of helping teachers to ensure cohesion in the delivery of the curriculum.

Team teaching is well established in this school and all teachers—special education and mainstream—work well alongside each other in the classrooms. Members of the special education team are timetabled to work for a period

each day in different classrooms. I noted good variation in this work. For example, each morning, members of the special education team work in the junior-infant classrooms assisting with structured play activities. For a period of six weeks, they co-teach a phonological awareness programme with the senior-infants' class teacher. Some members of the team deliver a structured literacy programme for an hour each day to first-class pupils which incorporates oral, reading and writing activities. The special education teachers also

storytelling. The parents are provided with book packs, library information and advice on how to develop the early language skills of their children.

I saw a storytelling session for one group of parents while I was in the school hall. This session, attended by a large number of parents, was relaxed and informal. The teacher sat in a comfortable chair, with a child sitting at her side. The book chosen was beautifully illustrated with very few words—

Parents are invited to come to the school where they observe their children at play, attend a talk from a speech therapist and watch a teacher modelling storytelling.

withdraw some pupils for specific support where it is considered necessary. Overall, the school's approach in providing learning support is very responsive to the pupils' particular learning needs and it ensures that any in-class intervention programmes are implemented in a consistent and efficient manner.

Book Start

During the spring term each year, the two pre-school classrooms, within the junior school, operate *Book Start*. This is a five-week pre-reading programme involving the parents of pre-school children. Parents are invited to come to the school where they observe their children at play, attend a talk from a speech therapist and watch a teacher modelling

so most of the story was based on the interpretation of the pictures. The teacher introduced the book, its author and the illustrator. She explained that when she finished reading, the parents and children together would get the opportunity to read their own copy of the book in the classroom. She read the text in an expressive way and as she turned each page, she skilfully prompted the child to observe details and to guess what could happen next. "Tell me what you can see," prompted the teacher. "It is hanging from a tree...it's a BAT," exclaimed the child as she turned the page excitedly. "You are right, clever of you to guess that," replied the teacher gently.

When the storytelling session came to a close the parents and their children returned to the pre-school classrooms with a

copy of their new book. Each pair read their new book together. During the process, the children counted things in the illustrations, turned the pages of the book, touched the print, pointed out characters and chatted about the story with their parents. The session lasted about half an hour. During a chat with a group of parents, they told me about why they thought *Book Start* was worthwhile: “Some parents don’t know how to help their child,” explained one mother, “here the teacher shows you how to do it and you get to become confident in helping your child.” The parents and the teachers alike remarked on the value of the *Book Start* programme in giving parents the confidence and the know-how to read with their children as well as forging an early and important link between the parents and the school.

Comprehensive oral language programme

A comprehensive oral language programme is provided in the school, which incorporates the use of story, rhyme, big books, oral reporting, games, play activities and language development in a cross-curricular manner.

In the past the teachers were very concerned that many pupils had poor language skills and found it difficult to listen attentively or to express their thoughts and ideas competently. In 2000, following discussions between the school, the local speech and language service and other community agencies, it was agreed that a pilot language programme would be introduced and monitored in the junior-infant classes. This programme, *Language towards Literacy*, was developed by a local speech and language therapist who was already familiar with the pupils’ needs. The

junior-infant pupils were assessed before and after delivery of the programme using three standardised tests for comprehension, use of grammar and expressive language. There was evidence of a significant reduction in the number of pupils with delayed language development after their first formal year in school and following their introduction to the language programme.

Following the success of the pilot programme, it is now implemented by the teachers in junior and senior infants. The programme incorporates the explicit teaching of vocabulary and fundamental language concepts. It sets out ten comprehensive language themes to be covered with junior-infant classes and senior-infant classes over the course of a year. In their weekly planning meetings the teachers discuss how the themes can be developed and reinforced across a variety of curriculum areas. In each classroom the themes are brought to life through the use of songs, poems, imaginative displays, investigation areas, posters, labels and a print-rich environment. The teachers place particular emphasis on developing the pupils’ language skills during the daily structured play sessions in the infant classes. Parents are kept updated about the themes each fortnight and are encouraged to chat about them with their children. Funding for the programme is provided by the local area partnership.

This programme has many benefits for the pupils and their teachers. One teacher summarised it as follows, “As a teacher, it was great to be given such a well-structured, easy to use language programme, and I have found that it is very easy to adapt it to the language needs of my class.”

Structured and free play sessions

As in most schools, the junior-infant pupils and the senior-infant pupils enjoy daily play sessions as part of their morning's activities. Yet again, in this school the teachers have gone one step further having skilfully arranged these play sessions so that the pupils have extended opportunities to talk about and discuss their activities under the guidance of the class teacher and members of the special education team.

Each morning, on entering their classroom, the infant pupils independently check their morning activities' chart to see the activity for which they are scheduled. There are five activities underway, facilitated by three or four staff members under the guidance of the class teacher. Each staff member is assigned a specific activity for a week at a time and is informed of the exact language structures that the pupils are to be taught and the expected learning outcomes. The learning outcomes, and how successfully they are achieved, are detailed in the class teacher's fortnightly plan. Each group of infants engages with one activity per session, completing five every week.

When I visited the morning sessions, at one table a group of junior-infant pupils were discussing the farm—a theme covered earlier with the whole class. To prompt their memory and to develop the pupils' expressive skills, the teacher used posters, picture cards, a "feely" bag and sets of toy farm animals. She asked simple questions such as "Describe it to us", "What can it do?" and "What size and what shape is it?" The pupils were encouraged to use full sentences to describe and talk about the farm animals. At the next activity,

a portable water-station, some pupils explored the principles of floating and sinking with empty water bottles. The teacher encouraged them to try out their ideas while pupils pressed, pushed, filled and emptied the bottles, all the while chatting about what they were doing.

At another table, five pupils sat tracing and stamping, ordering and combining objects in sets of five. At the arts station, the teacher had placed a vase of daffodils in the centre of the table. Initially, the pupils discussed the parts, colours, shapes, scent and even the purpose of the daffodil. Then they designed, cut, and glued petals for their own daffodil. While they worked, the teacher revised *Number* and the new vocabulary. For example, "How many petals have you drawn?", "You said you wanted five petals, how many more do you need?", "Describe the stalk to me again," and "Can you tell me anything about the crown of the daffodil?" Elsewhere, a group sat with the class teacher playing with a pack of picture and rhyming cards based on the sounds of the week. The pupils rhymed, clapped and did lots of syllabic activities together. Later, they also played bingo, snap and other games under the watchful eye of the teacher.

Using some of their discretionary curriculum time, the junior-infant teachers organise a brief free-play session each afternoon. This session allows the pupils to make their own choices about their play activities and encourages social interaction. The pupils may choose to revisit some of the morning activities or choose from a wide range of options such as jigsaws and counting games. The teachers reported that this dual approach to providing play activities, both

guided and free-choice, works very well. They find that the structured morning sessions help to settle the pupils into the school day quickly and positively while the afternoon session gives them some valuable personal time to play alone or with friends.

The use of Assessment for Learning (AFL) approaches

At the time of my visit, the teachers of second class were participating in a doctoral research project that considered the impact of new teaching methodologies on pupils' learning. As part of this research, they had introduced a range of strategies that they hoped would help the pupils to be clearer about what, how, and why they were learning. Concurrently, the teachers were looking at their own professional learning in terms of their attitudes, disposition and classroom practice.

Described below are some of the strategies the teachers have incorporated into their teaching of literacy.

Think time

During *think time* the pupils are given extended thinking time before they are expected to answer or contribute. During my visits, I noticed that whenever the teacher posed a question, the pupils knew that they were not expected to answer immediately. Instead they took time to think of what they wished to say. *Think time* was not always an independent activity, but included some pair work. From time to time, the teacher encouraged the pupils to use a *Think/Pair/Share/Square* strategy. To do this, the pupils were

given a problem to solve, for example, "Which room in our school is the larger, the library or the classroom? How could we find out the answer?" The pupils were given time to think of their own answers first and then assigned a talk partner to discuss their ideas. Finally, they were invited to share their ideas with another pair. One member of the square gave feedback to the class. I found that the pupils had become quite adept at the language of negotiation and

Concurrently, the teachers were looking at their own professional learning in terms of their attitudes, disposition and classroom practice.

diplomacy. One pupil told me that "It is nice to work with a talk partner because you get to talk about other people's ideas. Sometimes they give good ideas too."

Sharing the learning intentions and success criteria

At the start of each lesson the teacher tells the class in simple language what they will learn. For example: "Today in Science you will design and make a land yacht that can be used for carrying toys for a distance of one metre. This follows on from our lesson last week on how moving air can make things move." The teacher will then discuss the criteria against which the pupils can measure their learning. For

example: “If your design is successful it will list the materials required. It will show the shape and size of the yacht and also give instructions on how the yacht should be constructed.” These success criteria are written up on the board so that the pupils may check whether they are meeting them as they complete the task. At the end of the lesson, the teacher and the child discuss which criteria were met and how successfully they completed their work. The teacher also asks the pupils to choose their best effort from the lesson and to explain what is good about it.

Traffic lights

The pupils use the *Traffic Lights* strategy to identify their understanding of a topic or their readiness for the next stage in a lesson. When the teacher is about to begin a new topic she or he points to the large green dot on a poster showing traffic lights and signals to the pupils that they are about to start something new. This gives them time to settle down for the new lesson. As a particular task is coming to a close, the teacher signals to the class that they are at the amber stage. The pupils know that they have a short amount of time to

... the pupils assert more control over the pace of their learning and are conducting effective self-assessment of their own learning.

No hands-up

During certain discussion periods, the pupils are asked not to put up their hands when the teacher asks a question. Instead they wait patiently to be questioned and are aware that they may be asked to contribute to class discussions at any time and not merely when they want to volunteer an answer. The teachers use a number of techniques to encourage pupils to share their thoughts and ideas. For example, they use a random questioning technique called *Popsicles*. Each pupil's name is written on a lollipop stick in a container. The teacher transfers each name to another container when she or he picks that pupil for questioning over the course of the day.

finish off the task before the lesson concludes. A red signal indicates that the session is complete. Likewise, the pupils have cards with traffic lights on their desks. They use them to let the teacher know how a task is progressing. For example, when the teacher asks the pupils about what stage they are at during a writing task they simply choose an appropriate card and hold it up. This allows the teacher to decide how much more time is required. They also use the cards to alert the teacher whether they need help with a task. Those who select green are saying that they are okay with what they are doing and amber and red indicates whether they need additional help and how much exactly. In this way, the pupils assert more control over the pace of their learning and are conducting effective self-assessment of their own learning.

Providing feedback

The teachers are aware of how important effective feedback is to learning. They know that feedback should relate to the learning intention and that on-the-spot feedback to pupils as they work is most useful. During my visit, I found that the teachers' feedback stressed positive aspects of the pupils' work as well as mentioning specific areas that could be improved. During a lesson on fact files one second-class teacher took time to talk to individual pupils about their work. In giving feedback to one particular child, she

The teachers are aware of how important effective feedback is to learning.

remarked, "Your fact file is very good so far; you have put in lots of important details. Well done, you remembered to include something special that you have learned about the blue whale. What else might you include in your description to tell us more about what the blue whale looks like?" This feedback was related specifically to the success criteria for the task at hand and was both affirmative and constructive. One teacher told me that she had found it hard initially to stop saying things like "Good girl!" and "Well done!" without referring to the success criteria. She still notices herself giving vague praise from time to time but she is now much more aware of the need to focus on the learning intention.

Changes for the pupils

I spoke with parents and they told me that the pupils thoroughly enjoyed school because they were helped to learn at their own pace. One parent mused, "A happy child learns a lot quicker." Several parents praised the fact that pupils were given reading texts that matched their reading abilities. They felt that this encouraged the children to like reading more. One parent told how her daughter's pre-school brother was copying the reading process at home from her reading sessions with his older sibling: "He was already pretending to read picture books, putting his own words to the picture and texts and guessing what will happen next."

All the teachers reported that the pupils' behaviour was excellent during the team-teaching sessions. They believed that the pupils now participated at a higher level and stayed on task more productively when they worked in groups. The pupils' expressive skills were improving and they could recount, report and share their thoughts and ideas with clarity and enthusiasm. "Learning is definitely more fun for the children now," reflected a teacher, "they are learning through lots of games, social events and fun activities." The staff and the parents stressed the importance of the *Early Start* pre-school. They described how the pre-school's work, including its *Book Start* programme, was pivotal in preparing the pupils and their parents to participate in school life.

Changes for the teachers

The culture of team teaching is so well established in this school that for many recently appointed teachers, it is the only way of working that they know. All the teachers agreed that team teaching works for them and most importantly, for the pupils. The teachers described how working this way helps them to learn new skills in classroom management and teaching. However, they stressed that the class teacher always has first-line responsibility for the class and for determining the learning objectives for the pupils.

Many staff members commented on the high level of morale in the school. This is due in no small part to their team approach to planning and teaching and the support they receive from in-school management and colleagues. They create regular opportunities to meet, plan and discuss their work. Teamwork has given them great confidence and this is evident in their assured classroom practice. They are knowledgeable about whole-school programmes and teaching strategies and aware of what other class levels are doing and why. The teachers believe that a team approach to teaching enables a more in-depth look at the pupil and the learning process. One teacher told me that “Instead of saying I think I know what the children have learned; I can now say that I know with some certainty.” The in-school management and senior staff have encouraged the teachers to believe that they make a substantial difference to the lives of the pupils and the success of the school and that belief has been empowering.

Lessons for others

The work in this school highlights important messages for all concerned with literacy teaching.

Collaborative planning

The teachers are of the firm belief that regular opportunities to plan together are critical. A coherent approach is needed to ensure that programmes and teaching methodologies are implemented effectively and consistently. In this school all mainstream teachers at the same class level are timetabled to meet on a weekly basis.

Early involvement of parents

The management and staff feel that the sooner that parents become involved in the work of the school, the better the chance that they will continue to support their children and the school. The pre-school has experienced tremendous success in bringing parents into the classroom. Buoyed up by the success of the *Book Start* programme the school has prioritised the raising of parental involvement as a specific target in their DEIS action plan. The management has outlined a number of strategies that it wishes to pursue in order to involve parents, particularly parents of the older pupils.

Whole-school literacy programmes that match the learning needs of the pupils

The teachers have found that any literacy programmes need to be tailored to the specific needs of the pupils if they are to be successful. The staff spends a lot of time in choosing the most appropriate programme content to cater for the pupils’

The teachers continue to implement the whole-school programmes that have served them so well and monitor their continued benefits carefully.

oral, reading and writing development. They are very mindful of the social context in which the pupils are developing and have either adapted or created several programmes to cater for their specific learning needs. For example, the language programme for infant pupils, as previously described, was developed at a local level with the pupils' particular needs in mind.

Being open to new ways of doing things

The teachers propose that a culture of openness is required if a school is to improve the quality of its teaching and learning. In this school, the principal promotes and facilitates teamwork and the maintenance of a collaborative, professional culture as she feels that these elements are critical to the success of the school. She also encourages all staff to engage in continuous professional learning as teaching should be a process of lifelong learning. There are always new ways of doing things and unless we are willing to learn about them and to try them out, then we are not doing our best for the pupils. In this school, the teachers are encouraged to try out their ideas and they facilitate various in-school courses and workshops on a regular basis for other staff.

Conclusion

The school's work in improving the pupils' literacy standards has been highly successful. The teachers continue to implement the whole-school programmes that have served them so well and monitor their continued benefits carefully. They are also open to new ideas and educational practices. This is evident in the work that some teachers are doing in piloting the new *Assessment for Learning* strategies. Already these strategies are filtering through to other classrooms through word of mouth. The school's processes and procedures for planning, implementing and reviewing new projects have been very worthwhile. The management and staff have been prioritising literacy standards for a period of time and given the success that they have experienced, it comes as no surprise that their sights are now firmly set on improving attainment in Mathematics. To this end, they have already reviewed their school data on Mathematics and the success of their current interventions. From this, they have set out a detailed action plan and the teachers have drawn up a list of specific tasks to improve teaching and learning in Mathematics. They will monitor progress over one academic year and then review each task against its success criteria. Such targeted planning has been very beneficial to date and it is the expression of this school's commitment to high standards and their low tolerance of failure.





Chapter 9

School 8

A quest for higher standards in literacy

The school management and staff make every effort to celebrate the individual and collective achievements of the pupils, parents and staff alike.

Introduction

As I waited in the reception area to speak with the principal it became very evident to me that small things mattered in this school and that successes were celebrated. The reception area was rich with print and photographs. I noticed a list of all the pupils with birthdays that day and another display announced the pupils with full attendance to their credit. Photographs of parents and their children enjoying school activities drew my eye to another display. As I stood engrossed, passing adults gently enquired whether they could help me and pupils smiled and greeted me pleasantly. One pupil asked if I was the inspector and whether I would be visiting her class. When I informed her that most likely I would, she responded, "That's cool. We have some good stuff to show you." Visiting the classrooms later in the morning, I found out that she was right—they had some very good "stuff" to show me.

The school management and staff make every effort to celebrate the individual and collective achievements of the pupils, parents and staff alike. They are very proud of what their pupils have achieved and are fiercely protective of them. The school, very deliberately, provides an environment where its pupils experience success in their learning. As a

consequence, the pupils are happy, confident and eager to learn.

The teachers have initiated a number of highly successful literacy activities which have resulted in sustained improvements throughout the school in the standards of reading attainment. However, this chapter will focus on some of their early-reading activities: the teaching of phonics; the *Power Hour* for literacy; their use of big books and story sacks; and the *Language for Fun* programme with parents and pupils.

School background

Built in 1968, the school has 350 pupils from infants to sixth class. In recent times, the school building has been imaginatively refurbished and its layout and facilities have been adapted to meet the specific needs of the pupils in its community. For example, the well-stocked library with its cushions and rugs doubles up as a practice room for the school's string orchestra. Next door to the home-school-community liaison (HSCL) teacher's room is the crèche where a parent volunteer minds the children of parents attending HSCL courses and meetings. A concerted effort by government and philanthropic institutions has helped the school to develop its resources and each classroom is well equipped with computers and interactive whiteboards.

All teachers make great efforts to present the work of the pupils and the school community using up-to-date and eye-catching displays. The pupils have many opportunities to

discover their talents including the chance to develop skills in photography, sport, film-making, the arts or playing in the school orchestra. Recently, some teachers and senior pupils have been trained in peer mediation to assist them in helping others to take personal responsibility for resolving quarrels and conflicts.

When I discussed the history of the school with the principal and staff I was impressed by their determination to acknowledge the contribution of all principals and staff who had served there previously. I was told that they had all left their mark in different and significant ways and they handed on a school that was well positioned for continuous improvement.

What is happening in relation to teaching early-reading skills in this school?

A clear vision and sense of purpose

The principal—a long-serving member of staff—was appointed in 1999. She has a vast knowledge of pedagogy, extensive teaching experience and close associations with the school community. She possesses a resolute determination to maintain high standards coupled with learning experiences of a high quality for all pupils. She has helped to nurture a strong and enthusiastic teaching team who share in her clear vision and sense of purpose.

In her early years as principal, she initiated the process of whole-school planning by encouraging the teachers to form curriculum committees. Slowly and systematically a

worthwhile school plan for the implementation of the *Primary School Curriculum* (1999) emerged. The school currently has two committees for literacy and Mathematics in place. Committee members are drawn from all class levels and educational settings. They review specific aspects of practice and propose strategies for change to the whole staff.

The principal believes that collaboration must also be facilitated at a classroom level. To this end, she conducts assemblies each month with the junior and senior sections of the school. This frees up the mainstream class teachers to

assessment and discussion, the model of learning support is determined. Various models are operated, including withdrawal of small groups for focused intervention, delivery of specific intervention programmes in mainstream classrooms and team-teaching approaches.

In the 1999-2000 school year almost one-third of the pupils achieved at or below the tenth percentile as measured by the MICRA-T standardised test for reading comprehension. Disappointed initially, the management and staff did not despair but set about raising literacy standards in a

The special education teachers meet briefly as a team each week to review their work and to collaborate on methodologies, programmes and resources.

meet in pairs to agree broad programmes of learning for their particular class level. The special education teachers meet briefly as a team each week to review their work and to collaborate on methodologies, programmes and resources. Short, purposeful planning sessions have become a way of life for these teachers. "It's how we have always done it around here," commented a teacher.

As a first action to improve standards, the teachers are very aware that they must know their starting point. Each September the principal and staff discuss the test results⁴ for each class level. As required, more detailed individual analysis is carried out by the special education teachers. Following the

determined way. Currently, they have halved the number of pupils achieving at or below the tenth percentile. This constitutes a remarkable turnaround and the management and staff are resolute that the trend will continue. "It's up to us to make a difference. We need to find a way to improve things," one teacher told me.

Enhancing reading readiness

Many of the teachers attribute the steady improvement in reading readiness among infant pupils to the systematic, effective teaching of early-reading skills. The teachers consistently use big books, language-experience charts and library books to make reading pleasurable and interesting for

4 The staff utilises the *Belfield Infant Assessment Profile* (BIAP), the *Middle Infant Screening Test* (MIST), the *Non-Reading Intelligence Test* (NRIT), the *MICRA-T* and the *SIGMA-T*.

the junior pupils. Nursery rhymes, clapping games and rhyming activities are practised on a daily basis. The classrooms display lots of print in the form of labels, signs, flashcards, titles and phrases so that the pupils can learn to recognise words associated with their immediate environment. The school library has a dedicated junior section, laid out in an accessible manner with a carefully chosen selection of books. The library units are designed with angled shelves and stopper pegs to best display the titles. The books are often displayed according to themes or special interest selections. The principal explained to me that less is more when it comes to displaying books, “We don’t put out too many books at any one time, but we change the displays regularly. This keeps the weekly library visits both exciting and engaging for the children.”

The teaching of phonics is intrinsic to the teaching of early-reading skills. This school uses a commercial scheme called *Jolly Phonics* in the infant and more junior classrooms. The programme addresses five basic word-attack skills in a systematic, progressive way. The skills are:

- learning the letter sounds
- learning letter formation
- blending
- identifying sounds in words
- spelling tricky words.

Every day the junior-class teachers teach an element of the programme for fifteen minutes. They are guided in this by a handbook and its accompanying activity sheets and games

for reading and spelling. The teachers introduce and teach all forty-two sounds (phonemes) in the English language to the pupils using actions, sounds, rhymes and mnemonics. Each sound has a corresponding action which is acted out by the teacher and the pupil. For example, when teaching the sound of “m”, the teacher says, “Rub your tummy as if seeing tasty food and say mmmmmm.” As the pupils get more familiar and confident in identifying the sound, they no longer require the action. The teachers teach specified groups of sounds in sequence. The first group of sounds that is taught contains the letters (s,a,t,i,p,n) that make more simple three-letter words than any other six letters. “We really believe that having a specific phonics programme is the way forward,” a teacher explained to me, “It’s great to know that every child is getting a thorough grounding in all the sounds. The children love pointing at signs and words now, sounding them out and guessing them.”

At home, the parents are also involved in the teaching of the phonics programme. At the beginning of the school year the parents attend a presentation, given by the junior-class teachers, about how the programme works and how to help their children learn their sounds at home. One teacher videoed her pupils participating in a phonics lesson and she shows the lesson to the parents so that they can see first hand how the programme works. Each afternoon the pupils bring home their zip-lock bag containing their sound book. They practise their “sound of the day” along with its corresponding action and the parent stamps the book when the sound has been learned successfully.

The Power Hour

Some time ago, the learning-support/resource teachers, in conjunction with the mainstream class teachers, developed what they call a *Power Hour* as a response to the pupils' very wide-ranging attainments in tests administered to junior-infant classes and senior-infant classes. "We had to go back to the drawing board," recounted one teacher, "some of these children had never even held a book before they came to school. We knew we had to do something substantial as a team to address these challenges." They decided that a co-ordinated approach was required and devised an intensive literacy programme to be delivered for one school term in each senior-infant classroom. In devising this programme they drew heavily from tried and tested early-reading approaches as well as from the content and methodologies of the school's phonics programme.

Now in operation for many years, the *Power Hour* involves three learning-support/resource teachers working for an hour in the classroom with the mainstream teacher every day for a term. They operate four carefully prepared work stations and the pupils move from one station to the next each quarter hour working their way through a graded language and literacy programme. At the first work station, I observed a group of pupils take out copies of the book that they had taken home the previous night. These books contained small amounts of text and were beautifully illustrated. The teacher guided the group to re-read the book taking turns. She encouraged the pupils to discuss the book and its characters, and drew attention to the author, illustrator and title as well as other conventions of print.

At the next station a teacher engaged the pupils in revising their knowledge of sounds and words. They spent their time making and breaking words using magnetic letters, word cards, markers and whiteboards. Time is considered a very precious commodity and not a moment was lost while the pupils chanted sounds and words, unscrambled letters, composed simple words and read short sentences. Nearby, pupils at the writing station carried out early-writing tasks such as putting titles on pictures, labelling items, writing lists and composing their own news to share with the group. At the fourth station the pupils were introduced to their new books and received them with audible gasps of delight. Using a similar approach to that at the first reading station, the teacher guided them very competently in early-reading work.

Big books and story sacks

The school has been using big books (large-format books) for a number of years to model the reading process and to encourage a love of reading. The teachers have amassed a large store of these big books combining old favourites as well as newly-published titles in both English and Irish. "It doesn't make a difference what language they are in," an infant teacher explained to me, "it's mostly to do with the quality of the illustrations and the story overall; the text is only a small part of the process in the early years." In recent times the teachers decided to up-skill themselves in the use of big books to ensure that the pupils were getting as much as they could from the sessions. The school liaised with their DEIS co-ordinator for literacy and she came into the classrooms and modelled reading sessions with the pupils. According to the teachers, this modelling was a resounding success. "The great

thing about seeing her working with my class in my classroom,” explained a teacher “is that she made it look very do-able.”

The school’s use of big books is systematic. At the beginning of the school year the teachers choose ten books, one for every month, for each of the junior-infant classes and senior-infant classes. The pupils have ten-minute sessions at least twice weekly. In each classroom the sessions follow a similar format. The pupils are gathered around the teacher and seated on a large rug or blanket. The teacher holds up the

This year the work with big books took on a new dimension. Using grant-aid secured from the government’s Dormant Accounts Fund, the principal purchased thirty different story sacks and their corresponding big books. Each story sack contains a compact disc of a story, a game, an activity guide and a parent guide. It also includes soft-toy character props, scenery and a fact book on a theme similar to the story book. The school also purchased multiple copies of the thirty story sack books so that each pupil has the opportunity to read the book during the in-class story session or to bring it home to read with their family. The principal explained that these story

“This is definitely the way forward,” one teacher told me, “these books engage the children’s imagination and they just love them.”

book at their eye level. She reads the book expressively, slowly turning each page. She points to the print as she reads while also alerting the pupils to clues in the illustrations and other little details. She then re-reads the story getting the pupils to read parts of it with her. Using finger puppets, masks, toys, flashcards and classroom displays, the content of the book is brought to life. Later, the pupils take part in role-plays or they paint pictures, they identify words on flashcards and they play games using the story as a springboard for other learning activities. “This is definitely the way forward,” one teacher told me, “these books engage the children’s imagination and they just love them.”

sacks and corresponding big books will be used from infants through to first class. Indeed, some big books, such as those dealing with the solar system and map reading, will be useful in the middle classes. It is planned that these new additions to the big-book library will be introduced at the rate of one set per class per term to keep their novelty value at a premium.

Language for Fun

Efforts to bring parents into the school to attend meetings and courses and to assist in the classrooms have been highly successful. This level of parental involvement is due in no small way to the work of the home-school-community liaison (HSCL) teacher. In collaboration with her colleagues, she has organised an attractive programme of activities and courses

that brings parents to the school during the day. The parents told me that they find the school to be a very welcoming place contrasting greatly with their own childhood memories of school.

A measure of the school's success in harnessing parental support is seen in the operation of the *Language for Fun* programme in the junior-infant classrooms. The HSCL teacher noticed that many of these pupils had a very limited vocabulary and poor language skills when first coming to

Standardised test results show that their reading standards are improving steadily, year on year.

school. They would often just point at something or say a single word such as "toilet" or "bag" when expressing a need or giving a reply. She also noted that the parents would often do all the talking for their children. Using her previous experience as an infant teacher, she devised a clear and concise programme of early language learning to be delivered collaboratively by the parents and the class teachers. For thirty minutes, one day per week for eight weeks, four parents and the class teacher co-deliver the *Language for Fun* programme in the classroom. The class teacher and the four parents each work with a group of five pupils.

Each year the HSCL teacher invites a group of four or five parents from each of the junior-infant classes to attend training for the delivery of the programme. She models the methodologies that the parents will use when working with their groups. She provides each parent with a copy of the programme, complete with prompt questions, comprehension activities and the vocabulary to be developed. For example, she has prepared a list of words to be used relating to spatial relations such as "around", "through", "behind," and "in front". Sample questions are also listed such as: "Who is in the picture?"; "Where is the boy standing?"; "Where is he walking?" She meets with the parents for fifteen minutes before every session to support them and to talk through the activities ahead.

For each session during the eight-week programme, the parents will each work with the same group of five pupils. Every session has four phases, each lasting about seven or eight minutes. The session begins with the teacher or parent reading a big book to the pupils who are seated around her or him. During the second phase the parent works on comprehension activities relating to a short story. At first the story might be a simple single sentence, for example, "Mary went to town to buy a red dress," extending over time to more complex stories with six or seven sentences. During the third phase the pupils and parent play describing games with picture cards and dice. Each session winds down with the parent reading a new story to the group. After the session, there is a welcome cup of tea and a quick debriefing session for the parents with the HSCL teacher.

Changes for the pupils

The pupils' more recent achievements in reading are praiseworthy. Standardised test results show that their reading standards are improving steadily, year on year. While the number achieving below the tenth percentile has decreased significantly, there is also an increase in the numbers of pupils achieving in the average and above-average ranges. The results of the MIST test also give the teachers much to be proud of in terms of the senior infants' reading readiness.

It is clear that the pupils enjoy reading and look forward to choosing books themselves. They take good care of the books loaned to them. I noted that the class libraries were tidy and organised. There was an atmosphere of order and purposeful industry in the classrooms as the pupils engaged in group work or individual tasks, depending on the lesson in question. The pupils are accustomed to being taught by other teachers and parents who support their own class teacher and they enjoy and benefit from the variety of adults working with them. Through the phonics programme the younger pupils get to enjoy practising their new sounds at home with their parents in a fun way. This approach takes the "work" out of homework for both parents and pupils alike.

Changes for the teachers

All teachers agree that the biggest change in their practice has been their use of assessment data to inform models of intervention and programmes of learning. They use the

results of standardised tests to keep them informed of the success or otherwise of their approaches to teaching literacy and Mathematics. Every year, the teachers carefully interpret the data for their own classes and identify trends across the school. The steady improvement in literacy scores gives a clear indication that their various models of intervention, literacy programmes and other whole-school activities are having a positive effect.

Many of the teachers told me about the faith they have in their chosen phonics programme to equip the pupils with lots of the skills necessary to read. While it is only one aspect of the school's provision for teaching early-reading skills the teachers believe that it is a critical component. The structured nature of the programme with its actions accompanying the forty-two phonemes in the English language gives each teacher a specific approach to phonics teaching. They are justly proud of their pupils' ability to read and their positive disposition towards reading simply for pleasure

Lessons for others

A number of significant factors have facilitated change and improvement in this school. The work that is underway in this school provides a good example for other schools.

Visionary leadership

The teachers are aware that one of the most important success factors is the help and guidance they receive from the principal. She has been a powerful catalyst for positive change. She is knowledgeable about current educational

This is a happy place to learn and to work and an example of how visionary leadership and staff dedication can make a vital difference to the lives of pupils.

thinking and has researched effective learning practices. Engaging in careful analysis from the outset she identified the critical issues for the school and its community and defined strategic priorities. She saw that literacy levels had to be improved and that this could happen most successfully through closer collaboration of teachers with teachers and teachers with parents. Her sense of purpose is remarkable and it inspires all around her.

Having positive expectations

The teachers are sure that having positive expectations for pupils' learning is vital for success. They believe that negativity is detrimental to change and improvement and must be kept at bay. Staff members know from experience that they can and do make a difference to their pupils' educational attainments. They plan and teach well thought-out curriculum programmes that are focused, suitably challenging and delivered in a systematic way. They are out of sympathy with any notion that pupils can fail to learn.

Co-ordinated approach to the teaching of early-reading skills

The management and staff agree that a co-ordinated approach to teaching literacy skills is important. The teachers have set out comprehensive policies and programmes in their school plan to outline all aspects of teaching early-reading

skills. The programmes clearly respond to the specific needs of the pupils in terms of their social language, phonics, early-reading and writing skills. The programmes address what and how to teach all of the aspects of a rich literacy education. The teachers believe that a school plan should detail exactly what is expected from each teacher in terms of learning outcomes and teaching methodologies. One teacher told me that "A plan should leave nothing to chance and should not leave it up to a teacher to guess what to do."

Conclusion

This is a happy place to learn and to work and an example of how visionary leadership and staff dedication can make a vital difference to the lives of pupils. Staff members create meaningful opportunities for the parents to get involved in the school; their work to support parents is practical and earnest. The parents in turn appreciate the confidence and trust placed in them as educators of their children. The school's vision statement states that pupils will be provided with a "safe, stable, learning environment where everyone is loved, valued and respected." The pupils are thriving—they are enjoying their learning and succeeding in it. Taking the adage to be true that nothing breeds success like success, there should be great times ahead for this school community.



Chapter 10

**Lessons for
others**

Each story describes a range of approaches that the teachers and school community has adopted to improve the teaching of literacy or numeracy for their pupils.

Introduction

The chapters in this book tell the stories of eight schools that serve areas of considerable economic disadvantage. Each story describes a range of approaches that the teachers and school community have adopted to improve the teaching of literacy or numeracy for their pupils. None of these schools would say that it has the perfect solution to improving literacy and numeracy. Indeed, most of them would readily point out more things that they want to do and further improvements that they hope to implement.

Most of the schools would also say that they have had their successes and their failures. They will readily acknowledge that some initiatives have not worked—often for various reasons. The teachers will candidly admit too, that leading and teaching in these schools can be a daunting task when you are faced with the sometimes overwhelming and intractable difficulties experienced by the pupils and communities that they serve.

The eight schools described in this book are not unique. There are many other examples of good practice to be found in schools throughout the country. However, the efforts and insights of these teachers and school communities are very valuable and can be helpful if we are considering how to improve the work of similar schools. While each school is distinctive in its own way, all eight schools share many characteristics. This chapter looks at the lessons we can learn from these schools; first, the general management and organisational lessons and second, lessons about teaching and learning in literacy and numeracy. These lessons are applicable



not only to schools serving areas of disadvantage but to all schools.

General management and organisational lessons from the eight schools

Leadership style is a very important influence in these schools and one of the main contributors to their overall effectiveness. One of the main jobs of a principal is to help create a school culture that is positive, confident, open, accountable, and innovative. Despite their differing personalities and experience, the principals of the eight schools have several traits in common. They are all aware of the importance of their role in influencing the culture of the school. They believe that stronger school cultures motivate teachers and pupils. Each principal, in his or her own unique way, has helped to create a clear mission for their school and has ensured that this mission is reflected in the everyday work and life of the school. They promote shared vision, genuine participation, a friendly working environment, staff development and collective decision making. They model the values and beliefs that are important to the schools. They care for and are concerned about their teachers and pupils and this is noticed and emulated by others. These principals all have a strong dislike of accepting standards that were merely “good enough”. They are driven by a determination to make the learning experience better for all pupils.

The principals readily acknowledge that they rely heavily on their middle-management colleagues and teachers. **This ability to share leadership responsibly with others is a**

common strength across all the schools. This commitment to shared leadership has meant that in these schools the teachers have taken the lead in researching, monitoring and reviewing literacy and numeracy programmes. The teachers in these schools are for the most part confident and enthusiastic and a culture of school improvement is clearly evident.

The “can do” attitude that many of the principals, teachers and boards of management adopt in these schools, especially in the face of considerable challenges, is one of the characteristics of their leadership and success. These schools serve areas of considerable socio-economic disadvantage and at times the teachers and management may have felt somewhat overwhelmed by events and circumstances that were beyond their control. These schools experience significant difficulties in relation to educational disadvantage, pupils’ absenteeism, the retention of teachers, and discontinuity between the expectations of home and school. However, it is how these schools have chosen to handle these matters that mark them out as being particularly effective. The management and teachers have put structures and routines in place to help manage the realities of working in areas of socio-economic disadvantage. There is no hand-wringing and defeatism, just an understanding of how things are and a determination that the schools will make a substantial difference in the lives of their pupils.

The teachers have consistently positive expectations about levels of behaviour for all pupils. The teachers care about their pupils and respect them. They are good classroom

managers and realise that effective classroom management is the key to successful teaching. To have good classroom management in any classroom is not easy. To have good classroom management where the “real life” experiences of many pupils are at variance with the ethos of the classroom is definitely not easy, even if many of these teachers make it appear so. In theory, effective classroom management in these schools involves the same interventions as in all other schools: planning of the environment, planning of relevant learning and teaching activities, planning of time, and management of classroom routines and pupils’ behaviour. In

where there are considerable and ongoing staff changes, the management and staff have developed strategies to help assimilate new staff into school routines and procedures.

Not only do teachers in these schools plan effectively together, but they also demonstrate significant levels of co-operation in their teaching. **There are high levels of team teaching in these schools.** Teachers work purposefully and beneficially together in special education needs teams and in co-operation with other mainstream class teachers. Mainstream teachers have opened up the doors of their

Not only do teachers in these schools plan effectively together, but they also demonstrate significant levels of co-operation in their teaching.

practice, it also involves consistency. In these schools, most teachers’ expectation of behaviour, its monitoring and their response is consistent and fair. Of course, there are moments when the unpredictable happens but the teachers’ consistent application of well-established classroom routines helps to save the day.

The teachers are committed to strategic planning. They make the time to plan together on a regular basis at class level, as part of special education teams or as whole-school planning teams. Their planning is both “SMART”⁵ and highly relevant to the learning needs of the pupils. In the schools,

classrooms and welcomed in their colleagues to work with them in various contexts, for example in modelling good practice, mentoring and for co-teaching purposes. Co-teaching varies somewhat across the eight schools but the most common approaches involve station teaching (pupils rotate on a predetermined schedule through stations which are operated by a number of teachers), parallel teaching (where the class is split into heterogeneous groups and each teacher instructs half on the same material), and alternative teaching (the majority of pupils remain in a large group setting but some pupils work in a smaller group for more individualised instruction). For co-teaching to be effective,

5 SMART refers to Specific, Measurable, Achievable, Realistic and Time-bound.

teachers must be flexible in their practice and have a focus on learning outcomes. They must also have visionary leadership, which encourages innovative practice, and not be afraid to learn from mistakes.

The schools share a commitment to continuous professional development as the teachers believe that the school is a learning organisation for more than just the pupils who attend there. There is a very strong work ethic in all of these schools. The teachers work hard but they work in a focused and purposeful manner. They give freely of

The teachers understand the importance of literacy and numeracy in overcoming educational disadvantage.

their time and have a genuine desire to do what is best for their pupils. Teaching is more than just a job for them.

Most of the schools are genuinely and strongly committed to involving parents in their children's learning. This involvement has moved far beyond the provision of help and financial support and has focused on how the parents can improve the learning experienced by their children. In many cases, beneficial contact is made with the parents of pre-schoolers to help in the preparations for school and to foster the earliest possible involvement of

parents in the work of the school. The schools have created real opportunities for parents to work with the teachers and children in the classrooms and they have enabled the parents to support their children's learning at home in ways that bring extra success and positive outcomes for each child.

Literacy and numeracy lessons from the schools

Although the eight schools use varied approaches in providing for literacy and numeracy education, they share a number of common features that are worth reflecting on.

Within these schools, the teaching of literacy and numeracy education is prioritised clearly and purposefully. In other words, the teachers are aware that literacy and numeracy are the cornerstones of all learning. They know that it is important that the pupils develop these foundation skills at the earliest possible time in their schooling and continue to develop these skills as they progress through the school. The teachers understand the importance of literacy and numeracy in overcoming educational disadvantage. They realise that they have no time to waste in helping the pupils and have initiated structured input for the pupils from their first days at school. Teachers take every opportunity to reinforce literacy and numeracy in all aspects of the curriculum. For example, during Physical Education they ask pupils to count steps forward and backwards, jump forward in metres, turn so many degrees clockwise and anti-clockwise, organise themselves in threes and fours, and stand at various angles in the lined playing areas.

A key priority in these schools is a focus on achieving real, sustained improvements in the literacy and numeracy skills of the pupils. To do this, **the teachers carefully assess where the pupils are starting from so that they will know whether their varied interventions are successful.**

Initially, the pupils' achievement data informs what programme is implemented and ongoing assessment of progress informs adaptations of teaching and learning. Following any intervention programme, the final assessment data informs the next stages in teaching and learning and determines the continued viability of the intervention. These schools do not use assessment data as a stick with which to beat themselves. They use it to inform their practice. If the assessment data shows less success than the teachers had hoped they look first to their own teaching to see what can be improved. The teachers use a range of assessment practices that include anecdotal notes, checklists, retaining the pupils' completed work, summative and formative statements, photographs and video. Some of the schools have begun to involve the pupils in planning and monitoring their own learning but this is an area that will need further development in many of the schools.

The teachers are very aware that change is incremental and that it takes time. Dramatic improvements in the pupils' achievement levels in literacy or numeracy will not be apparent overnight. Given that the teachers invest considerable time and effort at the initial research and development stage, a decision to discontinue a particular literacy or numeracy intervention is never taken lightly. Thus, they will stick with a programme until it is proven to be less

effective than anticipated and any decision to discontinue will be made at a whole-school level.

The teachers are adamant that consistency of approach and collaborative decision making is critical to school success. They believe that teaching and learning must be consistent throughout the school and to that end every teacher's skills should be enhanced and ideas shared. One excellent teacher working in isolation will not make an excellent school: consistent provision must be in place for the entire eight years that the pupil attends the primary school.

The teachers realise that it is the school and the approaches that the teachers use that must adapt to meet the pupils' learning needs rather than expecting the pupils to change to match the school's needs. To this end, each school has responded to the particular needs of its pupils by developing or using a range of specific programmes, teaching strategies and assessment procedures. Some of these programmes are devised by staff members while others are commercially produced and are to be found in many schools around the country. It appears that the actual content of the programme can be less important than the culture of learning, collaboration between the teachers and the self-evaluation that the introduction and implementation of the programme stimulates. The use of a structured programme in several of the schools has promoted purposeful collaborative planning and differentiated teaching, encouraged co-teaching, self-evaluation and peer review, and provided opportunities to learn from other colleagues and to discuss in a focused way how to improve classroom practice.

In many instances, the selected programme will have to be revised or sometimes discarded but the cycle of assessing, planning, implementing, and reviewing becomes ingrained and makes for better classroom and school practice.

Fundamentally, by using a programme the teachers are provided with a vehicle through which to develop their teaching skills and the pupils are provided with consistent teaching that matches their learning needs. In many instances, the selected programme will have to be revised or sometimes discarded but the cycle of assessing, planning, implementing, and reviewing becomes ingrained and makes for better classroom and school practice.

The teachers in these schools create learning and teaching opportunities tailored to the varied needs of groups or individuals pupils. They differentiate lesson content, process and outcome in accordance with the identified needs and abilities of pupils. They draft differentiated curricular objectives that reflect the pupils' needs and abilities and use a variety of teaching and learning approaches. They employ a variety of strategies such as brainstorming, mind-mapping, direct teaching, teacher-modelling, active learning, role-play, the use of information and communication technologies, and multi-sensory learning strategies. The teachers use a variety of teaching and learning resources and facilitate pupils in demonstrating their learning

through a variety of responses. For example, they use adapted worksheets, diagrams, mind-maps, audio-recording, visual arts, poetry, drama and music.

Significantly, most of these schools have moved away from the practice of withdrawing pupils from the mainstream classroom for supplementary learning support. As significant numbers of pupils in these schools are at risk of experiencing serious learning difficulties, the mainstream and support teachers have chosen to work together in the classroom to provide for the pupils. This co-teaching approach allows them to provide differentiated learning activities for pupils in a more consistent, developmental manner. In many of the schools, the support teachers lead the various whole-school interventions. They work with the school staff to plan and implement programmes. They provide advice to the class teachers on matters such as the grouping of pupils for instruction and selecting learning materials that meet pupils' needs and interests, and they consult with other professionals and parents.

They felt they had to take positive action and so they did. They established their pupils' needs as best they could, they chose a suitable intervention or interventions to help cater for those needs, and are now sticking tenaciously to their goal of improving the pupils' learning outcomes.

While the overall provision is commendable in the eight schools it is also true that **the school staffs are well aware of areas where improvement is still needed.** Oral language teaching is one such area. Many of the children come to school poorly prepared to deal with the style of oral language that we generally use in classrooms. While most are quite competent in their understanding and use of language, their oral language is often significantly different to the sort of language that we use in schools. It is easy for many teachers and others to fail to appreciate just how different the language structures and usage of "school-language" is from the language that many children use at home or in everyday life. The children's lack of experience in using the language of school makes it difficult for them to learn and to demonstrate their learning. The details of oral language development practice is beyond the scope of this report, but many schools, curriculum developers and researchers are becoming more and more aware of the significance for children of oral language development experiences of a high quality, especially in schools serving areas of disadvantage.

The teachers were candid about their particular school's stage of development in literacy and numeracy provision. In many instances, the teachers are only beginning to make headway and explain that their literacy and numeracy provision is still merely partially developed. Their interventions were relatively recent and they were not entirely sure of how successful some will be. However, they had become frustrated with their previous lack of progress and had felt swamped with, and often discouraged by, the myriad of initiatives and imperatives that were coming their way. They felt they had to take positive action and so they did. They established their pupils' needs as best they could, they chose a suitable intervention or interventions to help cater for those needs, and are now sticking tenaciously to their goal of improving the pupils' learning outcomes.

And finally...

What's special about these eight schools is probably best summed up by the teachers, pupils and parents themselves:

"It's up to us to make a difference. We need to find a way to improve things."

Class teacher

"We had to go back to the drawing board. Some of these children had never even held a book before they came to school. We knew we had to do something substantial as a team to address these challenges."

Resource teacher

"This is definitely the way forward, working together is far better than struggling alone."

Class teacher

"We do a lot of reading and writing in this school. It makes us smarter."

Pupil

"I think Maths is great. Our teacher makes it easier for us to learn and other teachers help us in the classroom too."

Pupil

"I would be lost without the teachers in this school. They work so hard and always put the good of the pupils first ... The parents are grateful and I am also very grateful for all they do."

Principal

"Some parents don't know how to help their child. Here the teacher shows you how to do it and you get to be confident in helping your child."

Parent

"I am glad to work here. The pupils are very special and they deserve the very best from us."

Class Teacher







Appendices

Appendices

1 The eight schools described in this publication

The Inspectorate wishes to thank most sincerely the following schools that co-operated in the compilation of this publication:

- Holy Spirit Girls' National School, Ballymun, Dublin 11
- Scoil Náisiúnta Cairtriona (JNS), Mervue, Galway
- Scoil Náisiúnta Íosagáin (BNS), Faranree, Cork
- Saint Clare's National School, Cavan
- **Scoil Mhuire Banríon**, Mayfield, Cork
- Saint John's National School, Rathmullen, Drogheda, Co Louth
- Saint Joseph's National School, Dundalk, Co Louth
- Saint Patrick's Girls' National School, Carndonagh, Co Donegal

The schools are listed above in alphabetical order. This does not correspond with the order of chapters in the publication.

2 Background to Delivering Equality of Opportunity in Schools (DEIS)

In 2005 the Department of Education and Science launched DEIS, its social inclusion action plan. This action plan integrated all of the schemes and initiatives that had been in place over the years to address educational disadvantage in schools. The aim of this action plan is not simply to give additional supports to schools, but rather to assist schools and their communities to achieve equality in educational participation and outcomes for pupils and young people in line with national norms.

Schools were selected for participation in the newly integrated *School Support Programme (SSP)* on the basis of data regarding the levels of socio-economic disadvantage in their areas. The Educational Research Centre carried out a comprehensive survey of all primary schools in the State. The questionnaire sought information from school principals on specific socio-economic characteristics such as unemployment, family size and medical card possession. An index of disadvantage relating to urban and rural areas was developed and a ranking of schools was produced. Urban schools were categorised into two bands. Band 1 schools serve areas with the highest concentrations of disadvantage and they receive maximum support in terms of funding and staffing. There are currently 876 schools in DEIS—this comprises 199 urban primary schools in Band 1 and 141 in Band 2, together with a further 333 rural primary schools and 203 post-primary schools.

Central to the DEIS action plan is the promotion of effective teaching strategies and the development of whole-school planning processes that will improve the educational outcomes for the pupils in the targeted schools. Each school participating in the SSP compiled a detailed three-year action plan outlining specific targets based on its own priorities. This process of action planning emphasises the link between setting realistic targets and the systematic measurement of progress. DEIS places a high priority on specific measures to improve literacy and numeracy and emphasises the importance of early intervention in primary schools.

The staff in DEIS schools receive additional professional support from the Primary Professional Development Service (PPDS) which was formerly the School Development Planning Support Service and the Primary Curriculum Support Service. Facilitators provide additional, ongoing support and advice to these schools, helping them to analyse their own school data, review specific areas of practice and set up structures to facilitate school improvement in order to implement their three-year action plan.

A team of literacy and numeracy advisers (*cuiditheoirí*) supports and advises DEIS schools in adopting effective teaching approaches and in co-ordinating the work of class teachers and support teachers. To date, many of the teachers have received training in literacy using *First Steps* and *Reading Recovery* and in the teaching of numeracy using *Maths Recovery* and *Ready, Set, Go Maths*.

3 Literacy and numeracy programmes referred to in this publication

As part of the DEIS action plan, schools have been invited to avail of support in literacy and numeracy through the following programmes:

- *First Steps*
- *Reading Recovery*
- *Maths Recovery*
- *Ready, Set, Go-Maths*.

First Steps

First Steps is a literacy resource which, as part of the DEIS action plan, is being used by teachers to support the implementation of the English curriculum. This resource was developed in Western Australia and is based on research carried out by teachers for teachers and it has been trialled by teachers. It provides teachers with practical classroom strategies to help them develop pupils' language and literacy skills across the curriculum and makes specific links to assessment, planning and teaching. The programme highlights the connections between the teaching of speaking and listening, as well as reading and writing and provides teachers with explicit strategies for teaching literacy skills. *First Steps* aims to provide teachers with an understanding of the effective teaching methodologies and the various factors that enhance pupils' learning.

The underpinning principles of *First Steps* are based on the concept of developmental learning. The programme provides teachers with a continuum of indicators or behaviours

relating to all aspects of speaking and listening, reading and writing. In using the programme, teachers select the specific teaching strategies and procedures which are developmentally appropriate for their pupils.

All urban DEIS Band 1 and 2 schools are receiving the support of a designated DEIS *cuiditheoir* from the PPDS to assist in the implementation of the programme. *Cuiditheoirí* provide whole-school training in assessing pupils' literacy skills and choosing appropriate teaching strategies. This is complemented by explicit modelling of these strategies in the classroom and the engagement of teachers in professional dialogue to help them reflect on their classroom practice. In addition, each school allocates one teacher as a *First Steps* tutor. The tutor liaises with other staff members in relation to the programme content. He or she organises courses, makes presentations on the programme, works with new teachers to ensure continuity in provision, and disseminates information to parents regarding *First Steps*. Training for tutors is being rolled out based on the schools' identified needs.

Reading Recovery

Reading Recovery is an intensive, early intervention literacy programme which aims to prevent literacy difficulties at an early stage before they begin to affect a pupil's educational progress. It targets support at the lowest-achieving pupils in order to equip them with the skills to work with the average band of pupils in their mainstream classroom. Thereafter, it is intended that the pupils will continue to progress successfully using the skills, knowledge and confidence acquired from the programme.

The programme is delivered on a one-to-one tutoring basis for thirty minutes, five days a week. *Reading Recovery* teachers are specifically trained to teach pupils a variety of effective strategies for literacy acquisition. The daily lesson consists of learning experiences that are designed to enable each pupil to read independently and fluently. The period of instruction continues until the pupils can read at or above the class average. The intervention programme is supplementary to classroom teaching and lasts between eight weeks and twenty weeks. The pupils are chosen to partake in this programme following a series of tests carried out by the *Reading Recovery* teacher. After close observation of the pupils at work in their own classroom or in the learning-support room and on the basis of assessment results, the *Reading Recovery* teacher identifies the lowest-performing pupils in senior infants and first class. The pupils who partake are aged between five years and nine months and six years and three months.

To date 438 schools have participated in *Reading Recovery* and the programme has been very successful. There are now eight trained teacher leaders who provide *Reading Recovery* training through the Education Centre Network and these leaders are located at Monaghan, Dublin [Marino], Dublin West, Kilkenny, Limerick, Cork and Galway.

Reading Recovery and *First Steps* provide a complementary "twin-track" approach to tackling literacy problems at primary level.

Mata - Maths Recovery

Mata is a *Maths Recovery* programme which is being rolled out in DEIS schools, through the PPDS. *Maths Recovery* is internationally recognised as a highly successful programme of intervention in early number learning. *Mata* is one of the key DEIS initiatives being promoted to improve numeracy outcomes for pupils.

In essence, it is an early intervention programme which was developed to provide a systematic approach to assisting pupils who are having particular difficulty in Mathematics. The programme focuses on intensive, individualised teaching to the lowest-attaining pupils in order to advance them to a level at which they are likely to keep pace with their mainstream classmates. In each participating school, specific teachers are named as *Mata* tutors to co-ordinate the programme and these tutors and the mainstream class teachers receive intensive training in the programme.

The lowest-attaining pupils are identified for *Mata* support in their second year of school. The tutors or teachers carry out a comprehensive assessment of the pupils' mathematical knowledge and their use of numerical strategies. The assessment is interview based, and involves the pupils undertaking a series of numerical tasks. The tutor or teacher uses the outcomes of these tasks to compile a detailed profile of each pupil's learning needs. This provides the information to assist the tutor to determine the pupil's learning targets in Mathematics. There is an emphasis on continuous assessment during all teaching sessions. The tutor will carefully observe the pupil, hypothesising about his or her current knowledge

and strategies, and will select and adapt learning activities based on this information.

Each pupil will receive thirty minutes of one-to-one instruction either four or five days per week for a cycle of between 10 weeks and 15 weeks. The main focus is on early acquisition of skills with numbers and the pupil is presented with tasks just beyond the limitations of their current knowledge.

Ready, Set, Go-Maths

Ready, Set, Go-Maths is another early intervention programme being introduced to schools as part of the DEIS action plan. The programme is targeted at infant teachers and focuses on four related strands: sorting; relationships and operations; counting; and understanding *Number*. The programme contains detailed guidance on a range of teaching approaches to develop key concepts and early number skills. The activities elaborated in the handbook can be used to meet the needs of any pupil who is at the stage of early *Number*, whatever his or her age helping to promote the pupil's observation, language and reasoning skills.

Teaching approaches include teacher demonstration, guided activity and the provision of learning activities that involve pupils having a choice of activity and response. This programme supports teachers in engaging pupils in discussion. They provide the pupils with opportunities to use mathematical language in a carefully constructed and encouraging learning environment and the pupils' use of mathematical language reveals their level of understanding.

The teacher's own use of language in modelling and demonstrating the various activities is critical to the learning process. All DEIS Urban Band 1 and 2 Primary schools are providing *Ready, Set, Go-Maths*.

Reading for Fun and Maths for Fun

Reading for Fun and *Maths for Fun* are short-term, shared-learning initiatives that directly involve parents and other family members in classroom or home-based activities that assist pupils' literacy and numeracy development. Both initiatives are co-ordinated and implemented through the Home-School-Community-Liaison scheme within schools.

4 Bibliography

Department of Education and Science (1999). *Primary School Curriculum*. Dublin: Stationery Office.

Department of Education and Science (2005). *DEIS: Delivering Equality of Opportunity in Schools An Action Plan for Educational Inclusion*. Dublin: Department of Education and Science.

Inspectorate, Department of Education and Science (2005). *Literacy and Numeracy in Disadvantaged Schools: Challenges for Teachers and Learners*. Dublin: Stationery Office.

Educational Research Centre (2007). *Drumcondra Primary Reading Test – Revised (DPRT-R)*. Dublin: <http://www.erc.ie/index.php?p=33>

Other commercial publications or assessment tools used by the eight schools

Several commercial programmes and assessment tools are mentioned in this publication. The schools have chosen these from the broad spectrum of similar resources available and their names are provided in the publication for the reader's information purposes only. The Inspectorate does not promote the use of any specific literacy or numeracy programmes other than those included as part of the Department's DEIS action plan. Further details of the following resources can be obtained from the relevant publishers or support web sites:

British Ability Scales (BAS) Word Reading Test. Further details from the Special Education Support Service at www.sess.ie.

Language Towards Literacy (2000). Further details at www.languagetowardsliteracy.com.

Jolly Phonics (1998). Further details from Lloyd S. Jolly Learning Ltd., Essex, UK.

Phonological Awareness Training (1999). Further details from Jo Wilson Educational Psychology Publishing, University College London.

Rain Sentence Reading Test. Further details from the Special Education Support Service at www.sess.ie.

The Middle Infant Screening Test (MIST). Further details from the Special Education Support Service at www.sess.ie.

The Newell Literacy Programme (2004). Further details from www.learninghorizons.ie.

Effective literacy and numeracy practices in DEIS schools

“Nothing could have prepared me for the eager industry of the pupils, the busyness that hummed in the air and the activity that crackled and fizzed in that classroom,” was how one inspector described his experience in one of the eight schools featured in this report. This publication is a focused evaluation of good practices in literacy and numeracy skills development in schools that are supported by Delivering Equality of Opportunity in Schools (DEIS). DEIS is the action plan for educational inclusion of the Department of Education and Science.

The report contains stories from eight schools that serve areas of considerable socio-economic disadvantage. The ways in which the schools have sought to improve their pupils’ literacy and numeracy skills, the lessons that they have learned, and the real-life accounts of success and of frustration are all to be found in these pages. The schools’ stories are punctuated by quotations from their pupils and teachers: real-life accounts of how each school is making a difference, improving the quality of education for the children in its care.

If you are a teacher, an educator, a parent, a student, a policy-maker or just interested in learning about how schools can make a difference in places where making a difference matters most then this report will give you inspiration and food for thought.

P R O M O T I N G T H E Q U A L I T Y O F L E A R N I N G



Inspectorate Good Practice Guides

Inspectorate Good Practice Guides are intended to disseminate good practice and policy advice based on evaluation outcomes. They present the outcomes of focused and thematic evaluations of aspects of the educational system carried out by the Inspectorate, which has statutory responsibilities for the evaluation of schools at primary and second level in Ireland.

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