



The **RECIPE**

With the support of the Comenius Lifelong Learning Programme of the European Union. :

European Commission support for the production of this publication does not constitute an endorsement of the contents

which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made

of the information contained therein



Clare Education Centre Case Study

The Regional Education Centre tackling Literacy & Numeracy to improve ESL outcomes

Background and overall aims of RECIPE

The idea for the RECIPE project developed over a number of years through ongoing connection among the “Centres” in Karmoy (Norway), Albertslund (Denmark) and Clare (Ireland). This strong connection is testament to the long-term influence of Comenius and European Projects in general .All three “Centres” had worked on various education projects over a number of years and the role and significance of the “Centres” in each country became evident. Discussions later expanded to looking at the “Regional Centres” in Portugal and Greece.

While REC’s vary greatly throughout Europe, there is a common theme discernible in almost all countries. It is based on the belief that teachers and educators benefit from coming together locally, within a familiar environment, to examine their professional needs and those of their schools. While all REC’s work in conjunction with the National agenda there is also room for local initiatives. These local initiatives, which will be developed further in this article, are central to the value of REC’s as they are a direct response to the stated needs of schools within the catchment areas.

Clare Education Centre

The “Education Centre” is a particular arrangement that exists within the Irish Education system. They are similar to Regional Centres or Library boards that exist in other EU countries. The principal activity of Education Centres is to organize the delivery of national programmes of teacher professional development on behalf of the Department of Education and Skills. The Professional Development Service for Teachers (PDST) is the



national agency for School Advisors. In general these Advisors are assigned to work with Education Centres in delivering national priorities. However Centres also arrange a varied local programme of activities for teachers and educators in general.

The **ATECI** is the umbrella organisation of the 21 full-time and 9 part-time Education Centres in Ireland. It represents the interest of the network as a whole including both part-time and full-time Directors, staff and management committees of all centres.

The executive of the Association meets six times a year but we have organised the network into a series of six regional groups. The regional groupings meet separately and work very closely together initiating collaborative projects which are often piloted and then shared with the network in general.

Clare Education Centre, formerly known as Ennis Teachers' Centre, has, since 1972, supported the in-service needs of Clare teachers. Since August 2000, the Centre has been located in a new purpose-built complex on the Kilrush Road, The Centre services the CPD needs of 118 Primary and 18 Post Primary Schools in its region. The Centre also has a national remit as it administers the School Leadership Programme nationally in all 4000 Primary and Post Primary schools. In recent years it has taken on responsibility for the Maths Recovery Programme in disadvantaged (DEIS) schools nationally and the Leaving Certificate Applied programme, which is a national vocational programme at Post Primary Level. The Centre has a full time staff of 8 and over 100 part time staff.

In addition to the functions noted above Clare Education Centre has, in recent years, been involved in Intercultural Projects with Centres in European Union countries. The current RECIPE project looks at how the work of Local/Regional Education Centres can assist schools in addressing the issue of dropout. In the context of Clare Education Centre, RECIPE will investigate, how a range of interventions at Primary school level have assisted schools in creating a more meaningful and engaging curriculum. The investigation will hope to show that effective and innovative work at local level can support national initiatives preventing dropout and in fact inform national and international policy by addressing each school in its particular context

The current RECIPE Comenius Project aims to show that the local Education Centre has an important role to play in supporting the work of schools at local level. This national initiative (School Completion Programme) has been very successful with a retention figure of 90% announced recently (Jan. 2014) However any further gains will be hard won as we will now be looking at young people who have a chronic school attendance issue. It is well established that the decision to leave school is made well in advance of it actually happening, often while the pupil is still in primary school. RECIPE will attempt to investigate how an enhanced curriculum at Primary level will influence pupils to stay in school until completion. Clare Education Centre works with a number of partners including Mary Immaculate College of Education, Renaissance Learning, Maths Recovery Ireland, PDST, Department of Education and others in supporting these pupils.



Interventions from Clare Education Centre to tackle Early School Leaving through curriculum change and enhancement and linked to the National Literacy and Numeracy Strategy

Ireland's priority for addressing school failure begins with interventions in early years education. Early childhood care and education is an essential element of any strategy to address school failure as it impacts on children's lives at the optimal time

to support the development of key cognitive ,personal, social and emotional skills which are essential to successful engagement with the national education system. Clare Education Centre , in partnership with schools Colleges and other agencies in the region have developed a number of initiatives to enhance curriculum delivery , improve outcomes and improve retention. This Case Study looks at how the Education Centre connected with the aims and objectives of the National Literacy and Numeracy Strategy in making a number of initiatives available to schools. The unsatisfactory PISA results of 2009 were the catalyst for the National Literacy and Numeracy strategy.

This strategy is the national plan to improve literacy and numeracy standards among children and young people in the education system. The strategy seeks to address significant concerns about how well our young people are developing the literacy and numeracy skills that they will need to participate fully in the education system, to live satisfying and rewarding lives, and to participate as active and informed citizens in our society. Every young person needs to be literate and numerate. We use the basic skills of literacy and numeracy in almost every part of our lives when we communicate with each other – in traditional written forms or through the internet and digital media – when we follow signs and instructions, when we are at our work or enjoying leisure time, when we try to make sense of the mass of information and data available through the media, and Numeracy is the ability to use mathematics to solve problems and meet the demands of day-today living Literacy includes the ability to use and understand spoken language, print, writing and digital media 9 when we are managing our lives. In Ireland, we enjoy the benefit of having access to two languages: being able to use both Irish and English orally and in other forms gives us an added advantage in understanding ourselves and in contributing to the enrichment of our culture. Without the skills of literacy and numeracy, a young person or adult is cut off from full participation in many aspects of life: they cannot perform basic tasks, such as reading or sending an e-mail; advertisements and notices are meaningless to them; they cannot jot down a shopping list or understand a utility bill; and they are cut off from participating in and contributing to many aspects of the society and culture in which they live. Young people and adults who do not have adequate literacy and mathematical skills cannot participate fully in schooling or in further and higher education, and they have fewer opportunities to take up satisfying jobs and careers. Better literacy and numeracy for individuals contributes to a more just and equitable society Missing out on the skills of literacy and numeracy or failing to develop these skills to the best of each person’s capability is not just a loss for the individual: it is also an enormous loss for all of us in Irish society. Mastering the skills of literacy and numeracy brings with it many social, economic and health benefits for the individual and society as a whole. Having young people who can apply mathematical understanding in a growing range of economic, technical, scientific, social and other contexts is essential if we are to ensure employment and economic prosperity in the future. We know too that children who do not learn to read, write and communicate effectively are more likely to leave school early and in later life to be unemployed or in low skilled jobs, to have poorer emotional and physical health, to have limited earning power, and are more likely to be imprisoned. This strategy is premised on the strong belief that developing good literacy and numeracy skills among all young people is fundamental to the life chances of each individual and essential to the quality and equity of Irish society. The national strategy is about the contribution of the education system to better literacy and numeracy. The strategy is particularly mindful of children from disadvantaged backgrounds where ESL is a problem , especially from those who underachieve in literacy and numeracy.

In linking with the National Literacy and Numeracy Strategy Clare Education Centre focused on two area where it has strong national and international links. The Accelerated Reader programme which has been developed by Renaissance Learning in the UK and the “Mata sa Rang “ programme which has been developed in conjunction with Maths Recovery Ireland. These programmes are in addition to other national supports around literacy and numeracy which is delivered by the PDST (Professional Development Service for Teachers)

Accelerated Reader

Accelerated Reader (AR) is a computerised reading management program developed by Judi and Terry Paul, co-founders of Renaissance Learning. The program was introduced to school systems in 1986 as a tool to help teachers efficiently manage literature-based reading and is currently used in more than half the schools in the U.S. (Paul, 2003:1). Accelerated Reader focuses on a database of thousands of books ranging in reading levels from one to twelve. It provides teachers with specific data on student’s reading levels and their understanding of what they have read. Paul (2003:7) reveals that “because it is computerised, it reduces teachers’ paperwork while providing the information needed to guide and monitor student reading practise”. The Accelerated Reader program consists of a software package which is internet based that corresponds to books and the program has self-administered reading tests that the students use in the classroom to earn points.

Clare Education Centre co-ordinates the Accelerated Reader training programme., which significantly reduces the cost for schools. There has been great interest in the programme with almost 60 schools now taking part, including some secondary schools:

Implementation

There are four training evenings which take place in the computer suite at Clare Education Centre. Also during the year schools will receive a visit from a Renaissance Learning professional to assist the schools with implementing the program and to answer any questions that the teachers may have. It is advisable for each school to train at least two personnel on how to use the program as teachers can then share the responsibility of implementing Accelerated Reader in their school. Once schools have completed the training there is always online support available from Renaissance Learning using their online chat tool. The Renaissance Learning company is based in London and while their main product Accelerated Reader is hugely popular in the UK it is now beginning to prove popular in Ireland especially among schools in County Clare thanks to the initiative of Clare Education Centre and the RECIPE project.

Motivation to participate in reading is one of the major goals of AR. The Accelerated Reader program claims to motivate students and help them improve their reading skills (Renaissance Learning, 2006). Scott (1999:15) explains that if a student passes a test, he or she earns points that translate into a reward that has been determined by the class teacher. The points accumulate as the student reads more books and passes more tests.

Gearóid Roughan who has published a Thesis entitled *The Effect of the Accelerated Reader Program on the Reading Achievement and Attitudes of a Senior Class* has provided most of the training in Clare Education Centre. He has been a huge support to schools through his expertise.

Aims and Methods.

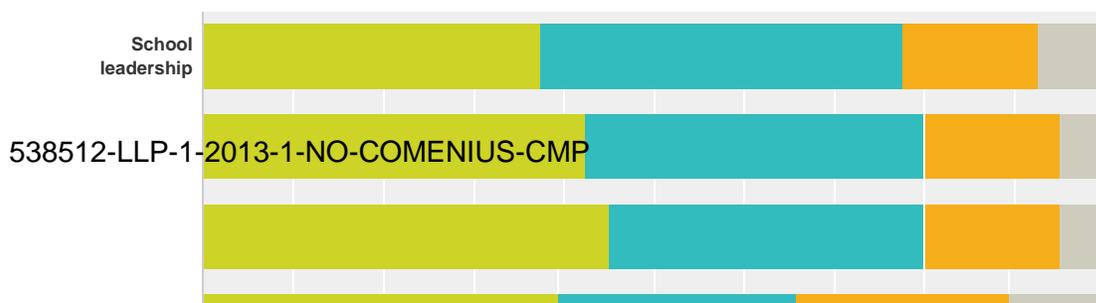
The overall aim of the Accelerated Reader Programme is to improve the standard of literacy in local schools. Special emphasis has been placed on DEIS schools, these are schools in disadvantaged areas where ESL is most common. Often additional funding is made available to these schools to enable participation.

Findings

The findings from schools surveyed in regard to the Accelerated Reader programme are most encouraging with in excess of 70% stating that the programme greatly influenced learning under different headings. See below for details and teacher comments. The growth in the number of schools joining the programme is probably its strongest recommendation, with wide-scale positive feedback.

Q18 Please rate the potential impact of the initiative in each of the following areas -

Answered: 40 Skipped: 29



Teacher pedagogy

School-REC partnership

Early School Leaving (ESL)

Pupil ability

Pupil experience

Attendance

Other

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Very strong Strong Average Weak Very weak Not sure

	Very strong	Strong	Average	Weak	Very weak	Not sure	Total
School leadership	37.50% 15	40.00% 16	15.00% 6	0.00% 0	0.00% 0	7.50% 3	40
Teacher pedagogy	42.50% 17	37.50% 15	15.00% 6	0.00% 0	0.00% 0	5.00% 2	40
School-REC partnership	45.00% 18	35.00% 14	15.00% 6	0.00% 0	0.00% 0	5.00% 2	40
Early School Leaving (ESL)	39.47% 15	26.32% 10	23.68% 9	0.00% 0	0.00% 0	10.53% 4	38
Pupil ability	42.50% 17	50.00% 20	5.00% 2	0.00% 0	0.00% 0	2.50% 1	40
Pupil experience	47.50% 19	40.00% 16	10.00% 4	0.00% 0	0.00% 0	2.50% 1	40
Attendance	30.00% 12	40.00% 16	20.00% 8	2.50% 1	0.00% 0	7.50% 3	40
Other	37.50% 3	0.00% 0	12.50% 1	0.00% 0	0.00% 0	50.00% 4	8

#	(please specify)	Date
---	------------------	------

#	Responses	Date
1	This is the second year our school is involved in the Accelerated Reader Programme and it is running successfully. However it would be an idea to facilitate schools that have it up and running for a refresher course and perhaps have a get together to get ideas from one another about how it runs in individual schools. Also it would be wonderful to see more Irish authors and publishers on the AR System.	9/25/2015 3:54 PM
2	Could be extended down to infant classes	9/24/2015 10:05 PM
3	Brilliant programme. Highly recommend	9/24/2015 8:02 PM
4	Difficult to manage at times due to large numbers.	9/22/2015 4:15 PM
5	Possibly the most worthwhile programme we have ever adopted in our school	9/22/2015 2:37 PM
6	Enthusiasm for same can be difficult to maintain over 2-3 years	9/22/2015 8:26 AM
7	Excellent programme to motivate readers in upper primary. Instant feedback on reading.	9/21/2015 6:05 PM
8	Some parents were concerned that pupils lost their love of reading when working towards targets.	9/21/2015 3:30 PM

Clare Education Centre support for ‘*Mata sa Rang*’ (Maths Recovery in the Classroom)

‘*Mata sa Rang*’ is an exciting new development which will bring Maths Recovery assessment and teaching approaches into the classroom. It has been developed by Dr. Noreen O’Loughlin, Maths Recovery Ireland with the support of Clare Education Centre. The programme was initially delivered in Clare Education Centre and is now rolled out nationally through the Education Centre Network. It is a good example of how a local “Centre/ REC” project can become a national programme.



MATHS RECOVERY
Ireland

Description -Mathematics/Numeracy in Disadvantaged Schools

Beginning in March 2004, the DES engaged in a review of numeracy in disadvantaged schools which they subsequently published as ‘Inspection of Literacy and Numeracy in Disadvantaged Schools: Challenges for Teachers and Learners (2005)’ and became widely known as the LANS report. A number of schools ‘with very high levels of disadvantage’ were selected for the survey. The findings of the report were shocking. It showed that 64% of pupils involved in the study had scores below the 20th percentile. In two of the nine schools in the sample, approximately 80% of pupils tested had scores which fell below the bottom quintile while one school had only 18.4% performing at that level. At the top end of the scale, only 2.7% of the pupils achieved scores above the 80th percentile, ranging from scores of 0.3% to 14.3%. The situation with the senior classes (ages 11/12 approximately) was more extreme at both ends of the scale. 73% of the pupils had scores in the bottom quintile and only 1.25% had scores in the top quintile.

Context: Mathematics Recovery (MR) is an early intervention programme developed by Dr. Bob Wright in Australia in the early 1990s as a response to children’s failure in early numeracy. It focuses on the area of number and emphasises conceptual development and a problem solving approach to maths learning. The MR programme had been in place as part of the Department of Education & Skills’ DEIS (Delivering Equality of Opportunity) initiative in 2007 where the response has been extremely positive. In these schools, it was introduced as an intervention programme, usually to first class children.

What is Maths Recovery?

Maths Recovery uses a diagnostic interview based on the Learning Framework in Number (LFIN) which allows teachers to get detailed insights into the pupil’s number knowledge and the sophistication of the strategies they use to solve number problems. The assessments are neither age-related nor curriculum-based. Assessments are routinely videotaped. Teachers who are trained in administering and interpreting assessments report that they feel more confident in their own knowledge of pupil’s maths understanding and learning and in providing directionality to their own teaching. The assessments provide a profile of each individual’s numerical knowledge. The tasks in addition and subtraction are specifically designed to elicit the level of sophistication of the child’s current numerical strategies. Information specific to the pupil gleaned from the assessments ensures that the teacher can plan for the pupil’s instruction by choosing specifically designed instructional number-based problem solving activities. Teachers select from a bank of instructional settings and tasks. Each task is aimed at the ‘cutting edge’ of the pupil’s thinking and knowledge. The teacher is engaged in close observation of the pupil’s progress and engages the pupil in discussion while allowing time for ‘hard thinking’ and problem solving.

As a pilot, the programme was trialled independently of the DES by Clare Education Centre and Dr. Noreen O'Loughlin, Maths Recovery with 17 schools in the Clare EC catchment area. The schools involved were not DEIS schools. Many lessons were learnt from this pilot about the needs of various schools and their capacity to undertake a full-blown MR intervention programme. Out of the experience of MR in both DEIS and non-DEIS schools was born *Mata sa Rang*.

What is *Mata sa Rang*?

Overview: *Mata sa Rang* is essentially an in-class approach to numeracy using Maths Recovery approaches. It has been developed by Dr. Noreen O'Loughlin, Maths Recovery Ireland and is being delivered nationally in partnership with the Education Centre Network. It is being directed at class teachers and the content of the first module was aimed broadly at first class maths curriculum objectives.

Aims & Methods : Assessments tasks are provided which can be administered to groups in relation to Number words and numerals; Counting and Grouping. The emphasis on assessment in this programme is to support class teachers assess groups of children in their own class. The objective is to ascertain the pupils' number knowledge and the strategies employed by them to solve number problems.

Teaching: The teaching in *Mata sa Rang* is geared towards classes, rather than individuals. It is organised as in the Maths Recovery intervention programme using the progression of key topics for teaching organised in three strands: Number words and numerals, Counting and Grouping. Similar guiding principles remain central to the instructional approach. Children are encouraged to think hard, to discuss and solve problems and to advance the level of their number knowledge and the sophistication of their strategies.

Training: Training is provided using local, trained, experienced and practising Maths Recovery teachers through Education Centres nationwide. It commenced as a pilot project in Clare Education Centre and has now been rolled out in all 21 Centres. It consists of five three-hour sessions taking place outside of school hours over the course of the term.

Implementations: Teachers in *Mata sa Rang* are encouraged to share their knowledge and expertise with their colleagues and to decide how best to implement the programme at their own school level. They are supported with information on implementation options available and are also supported in modifying them or in designing their own school-appropriate mode of implementation.

Evaluation of *Mata sa Rang*:

In the school year 2012/2013 almost 1100 teachers participated in Module 1 of the programme in all 21 Education Centres. Several of the centres ran outreach programmes also. Data was collected directly from the participating teachers, the tutors, and the Education Centre Directors. The reaction was overwhelmingly positive particularly given that schools and teachers had to pay for the programme as no national or external funding was available. Teachers attended the professional development programme outside of school time and undertook to do carry out gap tasks in their school or classroom between sessions. Such was the reaction that a second module for third class children (aged 9yrs approx.) was designed and made available in 2013/2014. To date, a further 900 teachers have participated.

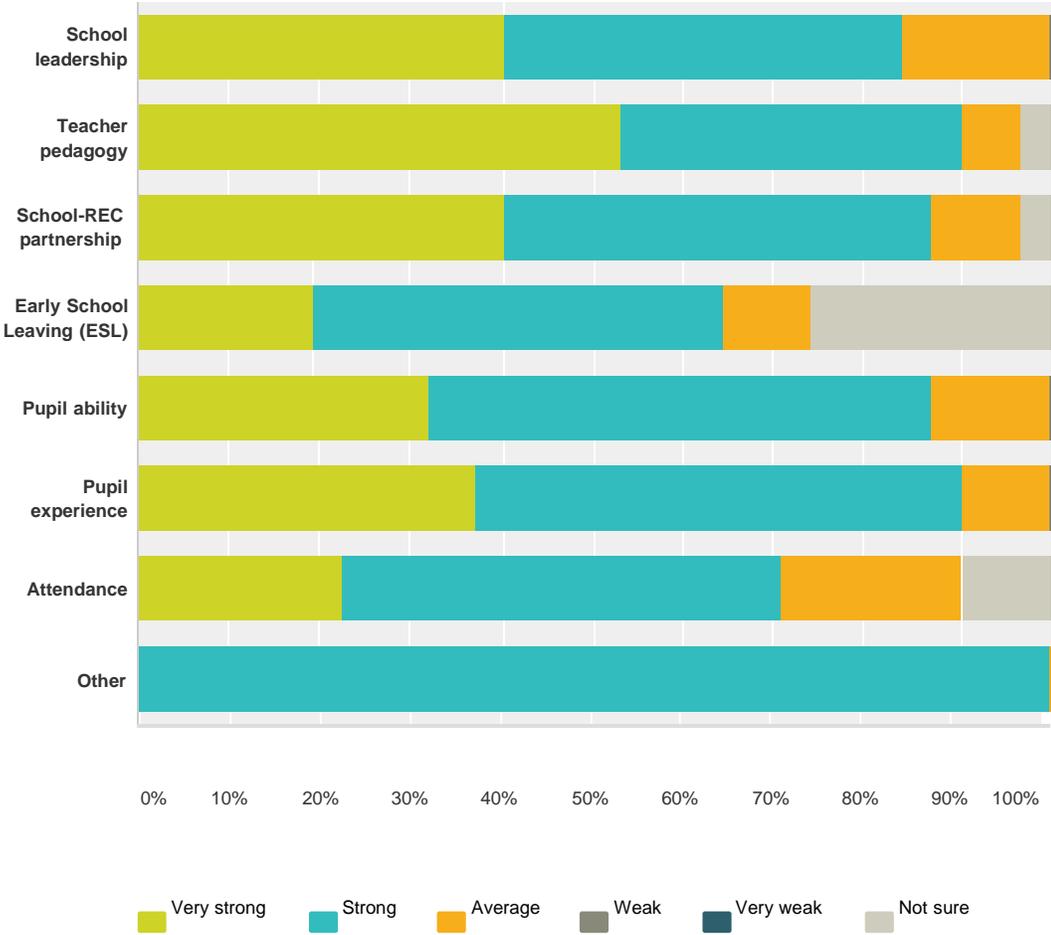


Overall, **Mata sa Rang** has developed as a unique programme in terms of content, structure, organisation and availability. It focusses on number; is provided by practising, highly trained teachers; available locally; spread over a period of months; involves teachers undertaking gap tasks in their schools; requires after-school commitment; and bears a significant cost per teacher to cover costs of tutoring and materialsⁱ.

Findings

The findings from schools surveyed in regard to the Mata sa Rang programme are most encouraging with in excess of 70% stating that the programme greatly influenced learning under different headings. See below for details and teacher comments

Q12 Please rate the potential impact of Mata sa Rang in each of the following areas



	Very strong	Strong	Average	Weak	Very weak	Not sure	Total
School leadership	40.63% 13	43.75% 14	15.63% 5	0.00% 0	0.00% 0	0.00% 0	32
Teacher pedagogy	53.13% 17	37.50% 12	6.25% 2	0.00% 0	0.00% 0	3.13% 1	32
School-REC partnership	40.63% 13	46.88% 15	9.38% 3	0.00% 0	0.00% 0	3.13% 1	32
Early School Leaving (ESL)	19.35% 6	45.16% 14	9.68% 3	0.00% 0	0.00% 0	25.81% 8	31
Pupil ability	32.26% 10	54.84% 17	12.90% 4	0.00% 0	0.00% 0	0.00% 0	31
Pupil experience	37.50% 12	53.13% 17	9.38% 3	0.00% 0	0.00% 0	0.00% 0	32
Attendance	22.58% 7	48.39% 15	19.35% 6	0.00% 0	0.00% 0	9.68% 3	31
Other	0.00% 0	100.00% 1	0.00% 0	0.00% 0	0.00% 0	0.00% 0	1

#	(please specify)	Date
---	------------------	------

Q13 Any other comments re Mata sa Rang?

Answered: 7 Skipped: 62

#	Responses	Date
1	I was very disappointed at how the Mata sa Rang Course was delivered - many of us were from multi class settings or from large groups with 30+ in the class. There were no suggestions given as to how to successfully implement Mata sa Rang.	9/25/2015 3:51 PM
2	Excellently ran last year with fantastic practical advise and experiences from the tutor	9/24/2015 10:04 PM
3	Need continued professional development in this area	9/24/2015 8:26 PM
4	Course content was very worthwhile. The standard of presentation of the course, however, was very poor.	9/24/2015 12:12 PM
5	It is a wonderful initiative and it has transformed teachers and made them far more effective when teaching mathematics.	9/23/2015 8:27 PM
6	Over half of the teachers in our school are trained in Mata sa Rang. When formulating our School Improvement Plan there was consensus and understanding amongst the staff because they were informed and more acutely aware of the needs of the pupils. Mata sa Rang has forced us to look differently at the teaching of Maths in the school and to focus more on the progress that pupils are making. Planning starts with the learning needs of the pupils rather than teaching from text books.	9/21/2015 11:43 PM
7	Probably the best CPD initiative in years.	9/21/2015 3:59 PM

Mata Sources

The Mathematics Recovery Intervention Programme and *Mata sa Rang* are supported by a series of four books:

- *Early Numeracy: Assessment for Teaching and Intervention*, 2nd edition, (2005) Wright, R.J., Martland, J.R. and Stafford, A.K., Sage Publications, London
- *Teaching number: Advancing Children's Skills and Strategies*, 2nd edition, (2006) Wright, R.J., Martland, J.R., Stafford, A.K. and Stanger, G., Sage Publications, London
- *Teaching Number in the Classroom with 4 – 8 year-olds*, (2006) Wright, R.J., Stanger, G, Stafford, A.K. and Martland, J.R., Sage Publications, London
- *Developing Number Knowledge: Assessment, Teaching and Intervention with 7-11 year olds*, (2011) Wright, R.J., Ellemor-Collins, D., Tabor, P. D., Sage Publications, London

Other Sources.

No Way Back? The Dynamics of Early School Leaving, by Delma Byrne and Emer Smyth (ESRI), is a joint publication of the ESRI, the National Council for Curriculum and Assessment (NCCA), and the Department of Education and Science (DES). The study was funded by the NCCA and the DES.

Department of Education and Science- *Early Leavers – What Next?* Report on Early Leavers from Post-Primary schools – pupils enrolled in 2009/2010 and not in 2010/2011

Department of Education and Science- *School Completers – What Next?* Report on School Completers from Post-Primary Schools – pupils enrolled in 2009/2010 and not in 2010/2011

Department of Education and Science-*Delivering Equality of education in schools*. An action Plan for Educational Inclusion. May 2005.

Department of Education and Science- *The School Completion Programme- Guidelines*.

Department of Enterprise Trade & Employment -*National Skills Strategy*. 2009

Department of Education and Science- *Core elements of The School Completion Programme*.

Department of Education and Science-*A brief description of the Irish Educational System.*

National Statistics Board .*The Irish Statistics System: The Way Forward and Joined up Government*
