# Programme of Work

Listed below are projects currently underway in the Centre. Unless otherwise stated, these summaries were first posted in March 2014.

**NAMER**   
*Last updated Jan 2015.*

The Centre has been involved in implementing and reporting on National Assessments of ‎Mathematics and English reading (NAMER) since the 1980s on behalf of the DES.

While earlier National Assessments covered a range of grade/age levels ‎and domains, the Department of Education and Skills decided that, from ‎‎2014, National Assessments would be implemented in the Second and ‎Sixth classes, and would include both English reading and mathematics.

In Spring, 2014, over 8,000 pupils in Second and Sixth classes in a ‎representative national sample of 150 primary schools completed secure ‎tests of English reading and mathematics and responded to pupil ‎questionnaires, while their principals, class teachers and parents also ‎completed questionnaires. A performance report (Shiel, Kavanagh & ‎Millar[)](http://www.erc.ie/documents/na14report_vol1perf.pdf) outlining achievement results was released in early 2015. A ‎context report, which will draw on both performance and questionnaire ‎outcomes, will be published in Autumn 2015.

A main ‎report (Eivers, Close, Shiel, Millar, Clerkin, Gilleece & Kiniry) and a technical report ‎‎(Eivers, Clerkin, Millar & Close) arising from the 2009 National Assessments, were published in 2010.

In 2010, the national assessments of mathematics and English reading were ‎implemented in a representative sample of Irish-medium schools and comparisons were ‎drawn between the performance of pupils in schools in general (based on the 2009 ‎assessment) and in Gaeltacht schools and Gaelscoileanna.  A summary report on the ‎National Assessments in Irish-medium Schools (NAIMS) was published in English and ‎Gaeilge in 2011 (Shiel, Gilleece, Clerkin & Millar) and a main report, in both languages, ‎was published in 2012 (Gilleece, Shiel, Clerkin & Millar).

In 2011, as part of the National Strategy to Improve Literacy and Numeracy 2011-‎‎2020, the Department of Education and Skills set out specific targets related to performance ‎on English reading and mathematics proficiency levels that were developed following the ‎‎2009 national assessments.  These targets, which include increasing the proportions of ‎higher-achieving pupils in schools and reducing the proportions of lower-achieving pupils, are ‎intended to be met by 2020. The performance report on the 2014 National Assessments provides ‎evidence of progress towards attaining the targets outlined in the ‎strategy.

# Assessing Levels of Disadvantage in Schools *Last updated June 2016.*

The Centre has been involved in assessing levels of disadvantage in schools on behalf of the ‎DES for many years.  In 1995, the Centre reviewed the criteria that had been used to identify ‎primary and second-level schools for inclusion in the Disadvantaged Areas Scheme (DAS) ‎‎(Kellaghan, Weir, Ó hÚllacháin, & Morgan, 1995).  Further work involved assessing levels ‎of disadvantage in primary schools applying to participate in the Breaking the Cycle scheme ‎introduced in 1996 [(Weir, 1999)](http://www.erc.ie/documents/report_applications_btc.pdf)and for the Giving Children an Even Break programme ‎introduced at primary level in 2001 [(Weir, 2004)](http://www.erc.ie/documents/gceb_implementation.pdf).  More recently, an assessment of ‎disadvantage at both primary and second level was completed for the School Support ‎Programme (SSP) element of the Delivering Equality of Opportunity in Schools (DEIS) ‎programme.  The assessment involved a survey of primary schools[(Archer & Sofroniou, ‎‎2008)](http://www.erc.ie/documents/deis_assess_disadv_prim_sch.pdf) in 2005 and an analysis of centrally-held data on educational and socioeconomic ‎variables in post-primary schools in 2005 and 2006 [(Weir, 2006)](http://www.erc.ie/documents/procedures_for_selecting_post-primary_schools_for_deis.pdf).  Subsequent to the initial ‎assessment of disadvantage, surveys of new and amalgamated primary schools were ‎carried out in 2007 and 2008 with modified versions of the questionnaire that was used in the ‎‎2005 survey.  Results of these surveys were used to allocate resources where indicated ‎under DEIS.  More recently, the Centre was asked by the Special Education section of the DES to conduct a survey to assess the socioeconomic ‎characteristics of students attending all primary and post-primary schools nationwide (see also ‎the section concerning A survey of the social contexts of primary and second-level schools in ‎Centre’s programme of work). An account of the survey procedures at primary level is ‎available [(Weir & Denner, 2015)](http://www.erc.ie/wp/wp-content/uploads/2016/05/survey_primary_schools_2014_ncse.pdf) and a report on the survey at post-primary level is nearing ‎completion (Weir & Denner, forthcoming).‎ While the Centre is currently not formally engaged in the assessment of disadvantage, the issue of identification remains part of the Centre’s programme of work.  An ‎exploration of the ways in which identification methods might be improved – particularly in ‎light of new data sources and of changing economic conditions – is the subject of ongoing investigation.‎ A technical group, established by the DES and comprised of some members of Centre staff ‎and officials from the DES, has been working on using other data sources to help in the ‎identification of schools that serve disadvantaged families. One specific method being ‎explored involves using the ‘HP index’, which uses census data to provide profiles of small ‎areas in terms of their relative disadvantage and affluence.‎

# DEIS *Last updated June 2016.*

## (Delivering Equality of Opportunity in Schools)

Work began in 2007 on an independent evaluation of the SSP (School Support Programme) ‎component of DEIS in primary and post-primary schools.  Since then, the evaluation has been ‎monitoring implementation of the programme and assessing its impact on participants.

Monitoring achievement and other pupil outcomes during the periods 2006/07 and ‎‎2010/13 has been a key feature of the evaluation at primary level. In 2007, pupils took tests in ‎English reading and mathematics and completed a questionnaire about their attitudes to ‎school and leisure pursuits.  Their parents and teachers were also asked to complete brief ‎questionnaires.  In schools in the urban dimension of the SSP, pupils in Second, Third and ‎Sixth classes were involved and in the rural dimension of the SSP, Third and Sixth class ‎pupils were involved.  Testing was repeated in the same schools and with many of the same ‎pupils in the spring of 2010.  At this point, Fifth class pupils were added to the testing programme, the purpose of which ‎was to provide a second cohort of pupils for longitudinal study in the 3-year testing cycle ‎‎(i.e., 2nd to 5th class). Outcome data‎ showed that pupil achievement in urban schools had ‎increased significantly between 2007 and 2010 in both reading and mathematics at ‎all grade levels [(Weir & Archer, 2011)](http://www.erc.ie/documents/deis_p1_main.pdf).  Testing was repeated ‎in the sample of urban schools in May 2013, and this revealed that the ‎gains made between 2007 and 2010 had not only been ‎maintained but have been built upon. A report describing cross-‎sectional and longitudinal ‎changes in pupils achievement was published in late 2013 [(Weir & ‎Denner, 2013)](http://www.erc.ie/documents/deis2013_bulletinreport.pdf).‎ A fourth ‎round of testing is currently underway in urban schools (May 2016) and a report on the ‎outcomes of that exercise will be available in due course.‎

Accounts of the evaluation in rural schools, ‎and characteristics of disadvantage in rural areas, are also available [(Weir & McAvinue, 2013](http://www.erc.ie/documents/rural_report2013.pdf); Weir, Errity & McAvinue, 2015‎).  ‎The evaluation in rural schools revealed qualitative and quantitative differences in educational ‎disadvantage in urban and rural areas, and pointed to a much stronger relationship between ‎poverty and educational outcomes in urban DEIS schools than in rural ones. ‎

Implementation studies have been a key feature of the evaluation since the outset.‎ Weir and Archer (2011) noted high levels of programme implementation in general in participating ‎schools. This was particularly true in the case of school planning for DEIS. Engagement with planning and target setting required in key areas ‎(e.g., in relation to pupil ‎achievement and parent involvement) was found to be very high ‎among participating schools. ‎In another implementation study, [Weir and McAvinue (2012)](http://www.erc.ie/documents/deis_and_class_size_report2012.pdf) noted that the ‎programme had largely had the expected effects on class size in schools participating in the ‎urban dimension of the programme. Analyses of more recent class size data in urban DEIS schools is nearing completion (Kelleher ‎& Weir, In prep). ‎

At second level, in 2007/08, all participating schools were asked to facilitate a ‎questionnaire survey of all students in First year and Third year.  The questionnaire covered a ‎number of issues, including students’ experience of transition from primary to post-primary ‎school, their attitudes to school, their leisure activities, and their educational aspirations.  ‎Students’ responses revealed that, in general, they held very positive attitudes to school, ‎although a minority of ‘disaffected’ students was identified.  In 2012/13, all of the 195 second-‎level schools in the SSP were visited and interviews were conducted with principals.  The ‎visits also facilitated the administration of a questionnaire concerned with implementation ‎issues including planning.  Interview and questionnaire data, along with feedback provided by ‎those that visited schools, formed the basis of an evaluation report on implementation at second level ‎[(Weir, McAvinue, Moran & O’Flaherty, 2014)](http://www.erc.ie/documents/deisevaluation_secondlevel_report2014.pdf).  That report also described socioeconomic and educational trends using data provided by ‎the DES and the State Examinations Commission (e.g., Junior Cycle retention rates and Junior ‎Certificate Examination performance) ‎in SSP and non-SSP schools since the programme began.‎ Analyses of trend data in educational outcomes for more recent years confirmed the earlier ‎findings [(McAvinue & Weir, 2015)](http://www.erc.ie/wp/wp-content/uploads/2016/04/DEIS-for-Web.pdf). As with primary schools in the programme, the ongoing ‎evaluation will involve continued monitoring of implementation and outcomes in participating ‎post-primary schools.‎

# Studies of Educational Disadvantage in Schools in Rural Settings *Last updated June 2016.*

A study of disadvantage in rural primary schools was prompted by a belief, supported by ‎some empirical evidence (e.g., from the evaluation of the Breaking the Cycle scheme in rural ‎areas and from the modelling exercise with the data from the 2005 survey of disadvantage ‎for DEIS) that the relationship between socioeconomic factors and educational outcomes is ‎weaker in rural than in urban settings.‎

Test data collected from rural schools in 2007 as part of the evaluation of the School ‎Support Programme (SSP) under DEIS were used to examine the nature of disadvantage in ‎rural areas.  In a [first report on the issue, Weir, Archer and Millar (2009)](http://www.erc.ie/documents/educ_dis_primary_rural_report1.pdf) described how ‎pupils in the rural dimension of the SSP performed significantly better than pupils in urban ‎SSP schools.  They also found that poverty was less concentrated in the rural than in the ‎urban sample, but no evidence could be found to implicate this in the explanation of the ‎superior performance of rural pupils over their urban counterparts.  No evidence of small ‎school size mitigating the effects of poverty on educational outcomes was found.  However, ‎the presence of relatively large numbers of pupils from some counties in the west of Ireland in ‎the rural sample appeared to account for some, but not all, of the urban/rural achievement ‎gap.  There was, however, support for the idea that the relationship between socioeconomic ‎characteristics and pupil achievement differs both quantitatively and qualitatively in rural and ‎urban areas.  The report concluded by suggesting that further work, in particular focusing on ‎the differential home experiences of pupils in rural and urban areas, was indicated.  That work ‎is currently being advanced and a report on the issue was released in 2013[(see Weir & ‎McAvinue, 2013)](http://www.erc.ie/documents/rural_report2013.pdf).

# PISA

## The Programme for International Student Assessment

The Programme for International Student Assessment is a three-yearly assessment ‎programme developed jointly by member countries of the Organisation for Economic Co-‎operation and Development (OECD).  It commenced in 2000 and is now the largest ‎international educational survey of its kind.  It is aimed at assessing the broad educational ‎achievements of 15-year-olds in English reading, mathematics and science and their ‎preparedness for adult life.  PISA is not constrained by the content of curricula, and its ‎findings form a significant contribution to policy development in Ireland.  For example, the ‎results of PISA 2009 contributed to the development of Literacy and Numeracy for Learning ‎and Life – Ireland’s national strategy to improve literacy and numeracy among children and ‎young people, 2011-2020 [(Department of Education and Skills, 2011)](http://www.education.ie/en/Publications/Policy-Reports/lit_num_strategy_full.pdf).

PISA is steered by member governments through the OECD, on the basis of shared, ‎policy-driven interests.  It is managed by a consortium of institutions that was led by the ‎Australian Council for Educational Research (ACER) up to and including PISA 2012 and is ‎currently under the direction of the Educational Testing Service (ETS) in the United States.  ‎Results for PISA 2012 were published in December 2013 and there will be some additional ‎reporting in 2014.  The survey design and assessment materials for PISA 2015 were ‎developed during 2013 for a field trial in 2014 prior to the main study in 2015.‎

Each cycle of PISA focuses on a ‘major’ achievement domain and on two or more ‎‎‘minor’ domains.  In addition, PISA collects detailed contextual information from school ‎principals, students, and, in some countries, parents.  In Ireland, a national teacher ‎questionnaire for teachers of the major domain is also administered.  In the first cycle in ‎‎2000, reading was the major focus.  In the second cycle in 2003, mathematics was the ‎major focus; in the third cycle (2006), science was the major focus.  In 2009, the fourth ‎cycle of PISA, reading was again the major focus, and in 2012, mathematics was the major ‎focus.  While 32 countries participated in PISA 2000, 41 were involved in the second cycle ‎‎(PISA 2003), and 57 countries were involved in PISA 2006.  Sixty-five countries/economies ‎participated in PISA 2009 and 2012.  Since 2003, all OECD member countries have taken ‎part in PISA.‎

Computer-based assessment is becoming a core part of PISA.  In 2009, an optional ‎assessment of digital reading literacy was included, in which Ireland and 18 other countries ‎took part.  In 2012, computer-based assessments of reading, mathematics and problem-‎solving were added and administered in over 40 countries, including Ireland.  For PISA ‎‎2015, work is underway to facilitate an entirely computer-based assessment though the ‎infrastructure in some countries will not yet permit this transition.  To support these ‎developments, the field trial for PISA 2015 will include a comparison of students’ responses ‎on similar items assessed using paper booklets and computers.  In PISA 2015, as well as ‎science, mathematics and reading, collaborative problem-solving will be assessed on ‎computer, and a small number of countries (not including Ireland) will assess financial ‎literacy.  Also for the first time, Ireland will administer a parent questionnaire, and students ‎and principals will complete digital, rather than paper, versions of the background ‎questionnaires.‎

PISA is implemented by the Centre on behalf of the DES.  It is supported in this ‎work by a National Advisory Committee, which includes representatives from the DES and ‎NCCA, as well as subject matter experts in English Reading, mathematics and science.  ‎For each PISA cycle, the OECD publishes an initial international report in the December of ‎the year following the assessment – so for the 2009 cycle, initial results were reported in ‎December 2010, and initial results for PISA 2012 were reported in December 2013.  The ‎Centre publishes national reports to coincide with the initial international publications.  In ‎addition, the OECD publishes subsequent reports on specific themes or optional ‎assessment domains in the year following the publication for the initial results.  So, for ‎example, it will publish results on problem-solving in April 2014. The Centre will also publish ‎additional thematic analyses during 2014.

Three reports based on the 2012 teacher survey have been published by the Centre.  ‎The first, concerning the implementation of Project Maths (a mathematics curricular reform ‎taking place at post-primary level), was published in November 2012, and the second, ‎concerning mathematics in Transition Year, was published in January 2013. A national ‎report on the outcomes of PISA 2012 was published in December 2013. These and other ‎reports for PISA can be found [here](http://www.erc.ie/?p=55).

*Further Information:*

*www.pisa.oecd.org (OECD website).*

# PIRLS *Last updated June 2016.*

## Progress in International Reading Literacy Study

PIRLS (Progress in International Reading Literacy Study) assesses the reading achievement ‎of Fourth-class pupils.  First conducted in 2001, PIRLS takes place every five years.  The ‎‎2011 cycle was the first time that Ireland took part in PIRLS.‎

PIRLS is conducted under the auspices of the International Association for the ‎Evaluation of Educational Achievement (IEA), and is managed at an international level by the ‎International Study Center in Boston College.  Within each participating country, a National ‎Research Centre manages the study.  In Ireland, this role is filled by the Educational ‎Research Centre.  The Centre is supported in this work by a National Advisory Committee, ‎chaired by the Department of Education and Skills, and with representatives from the main ‎education stakeholders.

A major purpose of PIRLS is to provide background information that can be used to ‎improve teaching and learning.  For example, the study collects detailed information about ‎curriculum and curriculum implementation, instructional practices, and school resources. The ‎assessment is based on comprehensive assessment frameworks developed collaboratively ‎with the participating countries.  The frameworks specify in some detail the knowledge, skills, ‎and understandings to be assessed.‎

The IEA is also responsible for TIMSS (Trends in Mathematics and Science Study).  ‎In 2011, the cycles for PIRLS and TIMSS coincided for the first time, giving countries the ‎opportunity to take part in one or both assessments.  Of the 49 countries took part in PIRLS ‎in 2011, 34 – including Ireland – also took part in TIMSS. The initial Irish report on the 2011 cycles was published in December 2012 [(Eivers & ‎Clerkin – PIRLS and TIMSS 2011: Reading, mathematics and science outcomes for ‎Ireland)](http://www.erc.ie/documents/pt_2011_main_report.pdf) and a set of thematic analyses of the Irish data was published in 2013 [(Eivers & ‎Clerkin – National Schools, international contexts)](http://www.erc.ie/documents/pt2011_context_report.pdf).  A year after each assessment, the ‎International Study Center publishes a report on the main results.  The main international ‎results for PIRLS 2011 were published in December 2012.  As some countries assessed the ‎same pupils in PIRLS and TIMSS 2011, an additional international report, analysing the ‎relationship between performance across the three domains of reading, mathematics and ‎science was published in October 2013.

# Both the field trail and main data collection phases for PIRLS 2016 have now been completed in Ireland.  A new feature of the 2016 cycle was a digital component, called e-‎PIRLS, which complemented the PIRLS paper-based assessment of reading literacy.

# TIMSS *Last updated June 2016.*

## Trends in Mathematics and Science Study

TIMSS (Trends in International Mathematics and Science Study) is a project of the International ‎Association for the Evaluation of Educational Achievement (IEA).  It assesses the ‎mathematics and science achievement of pupils in the Fourth and/or Eighth grades ‎‎(equivalent to Fourth Class and Second Year in Ireland).  First conducted in 1995, TIMSS ‎takes place every four years.  The 2011 cycle – when Ireland participated in the Fourth grade ‎component only – was the first time that Ireland had taken part since 1995. Ireland also took part in 2015, at both grade levels.

TIMSS is managed at an international level by the International Study Center in ‎Boston College.  Within each participating country, a National Research Centre manages the ‎study.  In Ireland, this role is filled by the Educational Research Centre.  The Centre is ‎supported in this work by a National Advisory Committee at each grade level, chaired by the Department of ‎Education and Skills, and with representatives from the main education stakeholders.

A major purpose of TIMSS is to provide background information that can be used to ‎improve teaching and learning.  For example, the study collects detailed information about ‎curriculum and curriculum implementation, instructional practices, and school resources. The ‎assessment is based on comprehensive assessment frameworks developed collaboratively ‎with the participating countries.  The frameworks specify in some detail the knowledge, skills, ‎and understandings to be assessed.‎‎

The IEA is also responsible for PIRLS (Progress in International Reading Literacy ‎Study).  In 2011, the cycles for TIMSS and PIRLS coincided for the first time, giving ‎countries the opportunity to take part in one or both assessments.  Of the 63 countries that took ‎part in TIMSS (at either Fourth or Eighth grade, or both) in 2011, 34 – including Ireland – also ‎took part in PIRLS.

The initial Irish report on PIRLS and TIMSS 2011 was published in December 2012 [‎‎(Eivers & Clerkin – PIRLS and TIMSS 2011: Reading, mathematics and science ‎outcomes for Ireland)](http://www.erc.ie/documents/pt_2011_main_report.pdf) and a set of thematic analyses of the Irish data were published in ‎‎2013 [(Eivers & Clerkin – National Schools, international contexts)](http://www.erc.ie/documents/pt2011_context_report.pdf).  The International ‎Study Center also publishes international reports on the main results for mathematics and ‎science.  The main international results for TIMSS 2011 were published in December 2012.  ‎As some countries assessed the same pupils in PIRLS and TIMSS 2011, an additional ‎international report, analysing the relationship between performance across the three ‎domains of reading, mathematics and science, was published in October 2013.

The most recent TIMSS assessment took place in 2015.  An initial Irish national report summarising Irish students’ mathematics and science performance (at both Fourth Class and Second Year) will be published by the ERC on November 29th 2016, to coincide with the publication of the international mathematics and science reports by the IEA.  A series of more detailed analyses, discussing factors associated with achievement and the broader educational context in Ireland, will be published by the ERC in 2017.

# Development of Tests

## Development of Tests for Primary and Post-Primary Levels

The Educational Research Centre develops standardised tests of achievement and ability, ‎normed for an Irish population.  Some tests are for commercial use – sold to schools – and ‎others are retained for research purposes.  The tests are designed to provide high quality, ‎accurate information on the aptitudes and achievements of Irish pupils.  Almost all of the tests ‎have been specifically developed for an Irish population, and with reference to the relevant ‎Irish school curricula.  The tests draw on 40 years of experience in test development, and ‎provide research-based, reliable information to schools.

In May 2013, the Centre completed the standardisation of paper-based tests of ‎English reading and mathematics for students in Second year in post-primary schools.  The ‎standardisation study represented the culmination of two years of test development that ‎involved the sourcing of test items from subject experts, the trying out of items in school ‎settings including pilot studies in 2012, and the preparation of final test booklets.

The tests for Second years were developed in response to requests from schools, to ‎indications in the [National Strategy to Improve Literacy and Numeracy 2011-2020](http://www.education.ie/en/Publications/Policy-Reports/lit_num_strategy_full.pdf) issued by ‎the Department of Education and Skills in 2011, and to the Department’s [Framework for the ‎Junior Cycle](http://www.education.ie/en/Publications/Policy-Reports/A-Framework-for-Junior-Cycle-Full-Report.pdf), issued in 2012, that students in post-primary schools would soon be expected ‎to sit standardised tests of English reading and mathematics on a yearly basis.  Information ‎on the tests, available to schools in early 2014, can also be found [here](http://www.erc.ie/?p=29).‎

While the tests are currently in paper-based format (as are all of the Centre’s tests), it ‎is likely that, over time, they will be available as computer-based tests. Currently, there are ‎four forms of each test – two targeted at students likely to take the corresponding Junior ‎Certificate Examination subject at Higher level, and two targeted at students likely to take the ‎examination at Ordinary or Foundation levels.  Performance is reported on the same ‎underlying scale, regardless of which level of the test a student sits.

The Framework for the Junior Cycle also made reference to standardised tests of ‎science.  In response to this, the Centre has recently begun work on a standardised test of ‎science for students in Second year.  It is intended to standardise this test in 2015 and to ‎make it available to schools in 2016.

The Centre is currently reviewing its primary-level tests, including the Drumcondra ‎Primary Reading Test (DPRT), and the Drumcondra Primary Mathematics Test (DPMT).  It ‎is likely that these tests will be revised, in line with forthcoming changes to the primary school ‎curricula in English and mathematics. ‎

Development of Computer-Based Testing*Last updated Mar 2016.*

The Centre is currently working on the development of a computer-based testing platform, and the rollout of new and existing tests in computer-based format.  Two key components are completed – the test authoring portal (how new tests are created within the system) and test delivery portal (what students see when they take a test).  The school administrator and test administrator portals are also almost complete, and will be followed by the development of an integrated payment system for test purchases.

The new cloud-based system ‎will support the requirement in the Literacy and ‎Numeracy Strategy in relation to digital ‎testing and/or a test of digital literacy, meet demand from ‎teachers, and improve the test-‎taker experience.‎ Specific to ‎concerns raised ‎about reporting requirements outlined in the Literacy and Numeracy ‎Strategy, it significantly ‎reduces opportunity to teach to the test, or even to practice the test.‎  Secure delivery of multiple test forms, all drawing from a large standardised bank of ‎items, ‎addresses concerns about teacher and student familiarity with content.

Other benefits include:‎

* increased flexibility in updating tests. ‎
* reduced workload for teachers, as all tests are scored within the system.
* immediate generation of test results
* the possibility of developing adaptive tests, which can provide more accurate ‎estimates of ‎ability and assess a broader range of ability levels.
* potential adaptation for students with additional ‎needs ‎‎(e.g., visual impairments). ‎
* the ability to vary the test content presented to students, thus ‎reducing opportunity to copy.‎

As part of the system development, four tests have been piloted (a revised and expanded version of the Drumcondra Reasoning Test, and Standardised Tests of Reading, Mathematics, and Science for Second Year students). Standardisation of the DRT and reading and mathematics tests will be completed in 2016 and tests will be available for sale before the end of 2016.

# Analysis of School Attendance Data

## Analysis of School Attendance Data in Primary and Post-Primary Schools

Data on non-attendance in primary and post-primary schools are collected by the National ‎Education Welfare Board (NEWB) through the Annual Attendance Report (AAR).  The core ‎of the NEWB data-set consists of four variables: (1) Total number of days lost through ‎student absence in the entire school year, (2) number of students who were absent for 20 ‎days or more in the school year, (3) total number of students expelled in respect of whom all ‎appeal processes have been exhausted, and (4) total number of students who were ‎suspended.  ‎

The Centre has been involved in analysing NEWB data for several years and has recently ‎released a report based on analysis of data for the 2010/11 school year (see ‎<http://www.newb.ie/publications/>). ‎The report integrates data for 2010/11 with summary ‎statistics for a five-year period and examines issues separately for the primary and post-‎primary sector.  For primary schools, data are analysed on the basis of whether the school is ‎in a rural or urban location, disadvantaged status of ‎the school, and by county.‎ For post-‎primary schools data are broken-down by school type (community/comprehensive, ‎secondary, vocational), and by county.‎

A report for 2011/12 is in preparation and analysis of data for the 2012/13 school year is due ‎to begin in 2014.‎

# A Study of Summer Learning Loss

There is evidence from research conducted mainly in the United States of America that ‎pupils’ reading proficiency declines during the summer holidays and that the decline is greater ‎among pupils from disadvantaged backgrounds.  Evidence from the US and elsewhere also ‎suggests that the gap expands over the course of primary schooling (i.e., there is a ‎progressive achievement gap).  The evidence for this is mixed in Ireland ([Martin, 1979](http://www.erc.ie/documents/vol13chp5.pdf); [‎Eivers, Shiel & Shortt, 2005](http://www.erc.ie/documents/litdis_summary_report.pdf); [Weir, 2001](http://www.erc.ie/documents/vol32chp2.pdf)).‎

A small opportunistic study of this phenomenon in Irish schools, focusing on the break ‎between First and Second class, was undertaken by the Centre.  In 2007/2008, over 1,600 pupils ‎in First class in 39 schools took the Drumcondra Primary Reading Test-Revised (DPRT-R) as a ‎follow-up to the administration of the screening component of the Drumcondra Test of Early ‎Literacy (DTEL).  Approximately half of all participating pupils were in schools in the School ‎Support Programme (SSP) under DEIS.  In the first week of September 2008, the principals of ‎all 39 schools were sent a letter in which it was pointed out that summer learning loss had not ‎been investigated in Ireland and that their school’s involvement in the administration of the ‎DPRT-R so late in the previous school year presented an opportunity, albeit on a limited scale, to ‎do so.  The principals were invited to participate in a re-administration of the DPRT-R in mid-‎September.  One principal declined to participate in the study.

While over 1,600 pupils were tested in total, only those that had test scores on both ‎occasions were retained in the analysis (678 pupils in the 21 SSP schools, and 566 in the 18 non-‎SSP schools).  While all pupils took Form A of the reading test on the first occasion, about half ‎were given an alternate form of the test in the second administration.  A simple comparison ‎between the results on both occasions and a comparison of patterns in SSP and other schools ‎revealed some surprising results.  Contrary to expectations, significant gains rather than losses ‎between spring and autumn were observed.  Furthermore, students in SSP schools showed ‎larger average gains between spring and autumn that those in non-SSP schools.  However, it is ‎worth noting that the test scores of SSP students were well below the national norm for spring ‎‎(47.6) and autumn (53.0), while those of their non-SSP counterparts were slightly above the ‎norm on both occasions.  Several explanations for the findings were considered.  Regression to ‎the mean (the tendency for pupils with low scores on the first occasion to score more highly on a ‎second occasion) was investigated but found not to be a major factor.  The SSP group may ‎have benefited from a practice effect as their gains were somewhat lower when they took an ‎alternate form of the test on the second occasion than when they took the same form twice.  ‎Consideration was also given to whether some features of the SSP programme itself could have ‎helped to explain the larger gain among the SSP group.  For example, the SSP provides for out-‎of-school learning opportunities (including during summer).  Unfortunately, there are no data on ‎the extent of these activities in the sampled schools.  It is also possible that, through the ‎Home/School/Community Liaison Scheme, the work of coordinators with parents has enabled ‎them to better support their children’s out-of-school learning, including during the summer period.  ‎The issue of summer learning loss continues to feature on the Centre’s work programme, and it ‎will continue to seek opportunities to collect data that may shed further light on the issue.

# Transition Year Survey

The Centre is currently carrying out a longitudinal study of psychosocial development in ‎adolescence with particular regard to participation in Transition Year.  Data are collected on ‎students’ engagement with school, on aspects of their social and personal development, and ‎on homework and study habits.  Students in selected schools participated annually in 2011 ‎‎(Third year and Transition Year students); in 2012 (Transition Year and Fifth year students), ‎and in 2013 (Fifth year and Sixth year students).  The longitudinal data are currently being ‎matched and prepared for analysis.

The students’ responses to detailed questionnaires will be used to investigate ‎relationships between participation in Transition Year and the selected indicators, including ‎comparisons between students who did and did not take part in Transition Year.  Additional ‎open-ended information on students’ perceptions, praise, and criticisms of the Transition Year ‎programme are also available.

For a subset of students who have opted in to a follow-on study, it may be possible at ‎a later date to use the information arising from this longitudinal research to examine in greater ‎detail associations between Transition Year participation and performance in the Leaving ‎Certificate Examination.‎

As a precursor to this study, a review of the Transition Year programme and associated research, placed in context for an international readership, was carried out and published as an open-access paper [(Clerkin, 2012)](http://epaa.asu.edu/ojs/article/view/1061).  
The Centre has also been engaged in work to chart the growth in uptake of Transition Year, at both school- and student-level.  [Clerkin (2013)](http://www.tandfonline.com/doi/full/10.1080/03323315.2013.770663) reports patterns of change for the period 1992 (immediately preceding the ‘mainstreaming’ of TY in 1994) to 2011.  This work will be updated in the coming years.

# A Study of Differences between Schools in terms of Intake and Outcomes

The National Literacy and Numeracy Strategy ([DES, 2011](http://www.education.ie/en/Publications/Policy-Reports/lit_num_strategy_full.pdf)) calls for greater use to be made ‎of assessment data at both school and system levels.  At school level, it is proposed that the ‎results of standardised tests should be used to monitor aspects of student learning, to inform ‎school self-evaluation processes, and to track the achievement of groups of students at risk ‎of underperformance.  At system level, the Strategy calls for aggregated assessment ‎information to be used to form an overall national picture of performance in literacy and ‎numeracy (see also [OECD, 2012](http://www.oecd.org/edu/school/44568025.pdf)).

Internationally, the use of sophisticated statistical techniques such as value-added ‎modelling to compare performance across different schools is common place.  To date, ‎comparatively little attention has been given to using quantitative approaches and large scale ‎assessment data for assessing school effectiveness in the Republic of Ireland.

The current project makes use of existing datasets in order to consider whether or ‎not schools can be said to perform significantly different to expectations, after controlling for ‎student background characteristics.  Datasets explored as part of these analyses include the ‎‎2009 National Assessments, the Programme for International Student Assessment, Junior ‎Certificate examination results and data gathered as part of the DEIS evaluation.

Preliminary findings suggest that existing datasets are of limited use for ‎distinguishing between schools on the basis of performance as the majority of large scale ‎educational assessments currently conducted in Ireland are cross-sectional in nature and ‎therefore do not include measures of achievement over time.  The limitations of cross-‎sectional studies for these types of analyses have previously been identified in the literature ‎‎(see e.g., [OECD, 2008](http://www.oecd-ilibrary.org/education/measuring-improvements-in-learning-outcomes_9789264050259-en)).  A further limitation of many existing datasets is that data are ‎available for samples of students only.  Although population data are available in state ‎examination databases, these provide very limited data on student background.

# ICT Census

## ICT Census of Primary, Post-Primary and Special Schools: Analysis of Census Data

Surveys on ICTs in primary, post-primary and special schools have been carried out on a ‎periodic basis since 1998.  The one conducted in 2013 is the fifth occasion on which a ‎census of ICTs has been implemented.  The most recent one prior to 2013 was in 2005.‎

Questionnaires were delivered online for the first time in the 2013 census.  Also for ‎the first time, questionnaires for teachers were administered, again online.  Therefore the ‎‎2013 ICT census can be considered a continuation of previous censuses at the school level, ‎whilst at the same time providing baseline information on teachers’ views on and uses of ‎ICTs in teaching and learning.

The Educational Research Centre and the Education Department of St Patrick’s ‎College, Drumcondra, are responsible for the review of draft questionnaires, for checking, ‎weighting and analysis of data, and for drafting a report. A final report will be delivered in ‎early 2014.‎

The design of the survey entailed contacting every primary, post-primary and special ‎school in the country, and asking the principal to complete the school questionnaire. In each ‎primary school, one Second-class and one Fourth-class teacher were asked to complete a ‎questionnaire, while, in each post-primary school, two teachers of Second-year students and ‎two teachers of Fifth-year students were asked to do so.  One to two teachers in each special ‎school were invited to complete a teacher questionnaire.  The questionnaires were sent to ‎schools in April 2013, with data collection taking place until the end of June.  Due to low ‎teacher response rates, the survey of primary and post-primary teachers was re-opened to ‎extend the period of data collection during the month of October 2013.‎

The content of questionnaires is similar across primary, post-primary and special ‎school categories in order to maximise comparisons between them.  Principals’ responses ‎have been weighted in order to allow generalisations to the population of schools.  Teacher ‎surveys, on the other hand, have not been weighted, and results are not necessarily ‎representative of teachers in general.  The questionnaires gather detailed information, both ‎quantitative and qualitative, on key areas and issues relating to ICTs in schools, and results ‎are expected to contribute to the Department’s policy development in these areas. Themes ‎include:‎

•    ICT infrastructure in schools  
•    Access to and frequency of ICT usage in teaching and learning  
•    Perceived obstacles and priorities in ICT usage  
•    Continuing Professional Development in the area of ICT  
•    Perceived impact of ICT usage on students’ engagement in learning  
•    School policies on Internet safety and sharing of digital teaching resources.‎ ‎ ‎

# Reviews of Oral Language Development

## Reviews of Oral Language Development, Reading and Mathematics (3-8 years)‎

In response to calls for tender from the National Council for Curriculum and Assessment, the ‎Centre has contributed to three recent reviews of the research on the theory and pedagogy ‎relating to children in the 3-8 years age range in: ‎  
•    Oral language  
•    Literacy  
•    Mathematics.

To date, reports on [oral language](http://www.erc.ie/documents/oral_language_in_early_childhood_and_primary_education_3-8_years_.pdf) and [literacy](http://www.erc.ie/documents/literacy_in_early_childhood_and_primary_education_3-8_years.pdf) have been published.  The ‎report on mathematics (in two volumes) will be published in early 2014.

# A Study of the Implementation and Impact of Project Maths

Project Maths is an initiative which involves the complete revision of the mathematics ‎curriculum at junior and senior cycles at post-primary level.  Project Maths began in 24 ‘initial’ ‎schools in 2008 and was rolled out, on a phased basis, to all post-primary schools in the ‎country in the autumn of 2010.

Mathematics was the main focus of the PISA 2012 study and a decision was made ‎nationally to administer the PISA 2012 assessment in all of the initial Project Maths schools ‎as results of the mathematics assessment in these schools are of particular national interest.  ‎A national questionnaire was administered to all mathematics teachers in schools ‎participating in PISA 2012 in Ireland.  A national questionnaire was also administered to ‎mathematics school co-ordinators in participating schools.  These questionnaires examined ‎teachers’ views on mathematics teaching and learning in general, as well the implementation ‎of Project Maths.

Analysis of teachers’ views on the implementation of Project Maths, including ‎comparisons of the views of teachers in initial and non-initial schools, has been published in a ‎report entitiled, Teaching and learning in Project Maths: Insights from teachers who ‎participated in PISA 2012 ([Cosgrove, Perkins, Shiel, Fish & McGuinness, 2012](http://www.erc.ie/documents/p12teachingandlearningprojectmaths.pdf)). Results ‎of analyses of PISA mathematics achievement data in initial Project Maths schools, ‎compared with non-initial schools, will be the focus of a separate report, PISA and Project ‎Maths, which will be published in 2014.‎

# A Study of Academic Resilience among Students from Disadvantaged Backgrounds

Studies of student achievement in Ireland have noted that average achievement among ‎students from disadvantaged backgrounds is well below that of nationally representative ‎samples ([Eivers, Sheil and Shortt, 2004](http://www.erc.ie/documents/litdis_report.pdf); [Weir, 2001](http://www.erc.ie/documents/vol32chp2.pdf)). Indeed, [Sirin (2005)](http://steinhardt.nyu.edu/scmsAdmin/media/users/lec321/Sirin_Articles/Sirin_2005.pdf) found that of all ‎factors examined in the meta-analytic literature, family socioeconomic status (SES) at the ‎student level is one of the strongest correlates of academic performance, while at the school ‎level the correlations were even stronger.‎

However, despite the strong link between SES and academic achievement, many ‎students from disadvantaged backgrounds are able to overcome their personal challenges ‎and become successful in school.  The available educational research calls these students ‎resilient, because they have overcome adversity to achieve academic success.  ‎Understanding how these students overcome their social background and succeed in school ‎can allow us to identify factors and conditions that could help more students succeed despite ‎the challenges they face ([OECD, 2011](http://observatorio-das-desigualdades.cies.iscte.pt/content/news/against%20the%20odds.pdf)).‎

Using data from the 9-year-old cohort of the Growing Up in Ireland (GUI) study, it is ‎proposed to examine in detail the psychosocial correlates of academic resilience and the ‎processes by which they contribute to academic resilience, by creating a model of academic ‎resilience.  It is also planned to examine how these factors change over time using data from ‎the second wave of GUI which collected data on 13-year-olds in 2011/12.‎

# A Secondary Analysis of Growing Up in Ireland

## Data on Educational Experiences and ‎Outcomes for Children with Special Educational Needs ‎

This study uses the Growing Up in Ireland database for the 9-year-old-cohort and is being ‎carried out by the Centre in collaboration with the Special Education Department of St ‎Patrick’s College, Drumcondra.  The aims of the secondary analysis are to:‎

‎1.‎    Provide new evidence to help us understand more clearly how children with special ‎educational needs, and specific identifiable subgroups within this cohort if possible, ‎are faring at school in terms of:‎

* Outcomes which relate to academic attainment/ achievement and expectations in ‎relation to same
* Participation in and engagement with school and learning, and their learning ‎progress and expectations in relation to same
* Independence skills, self-esteem, well-being at school and relationships with ‎teachers and peers.‎

‎2.‎    Identify and analyse the factors influencing these experiences and both formal and ‎less formal educational outcomes.‎

‎3.‎    Identify potential implications for educational policy and or practice arising from the ‎analysis.‎

The analyses are being carried out in four phases which involve the following:  ‎  
‎1.‎    Establishing a classification scheme for special educational needs  
‎2.‎    Describing the outcomes of children in the different special educational needs categories; ‎outcomes cover attainment, engagement, well-being and independence.‎  
‎3.‎    Describing the individual, home, class, school and community characteristics of ‎children in the special educational needs categories  
‎4.‎    Synthesising the findings of the first three phases using multiple regression analyses.‎

A draft report was submitted to the National Council for Special Education (NCSE) at the end ‎of 2013, with a final report expected in 2014.‎

# Evaluation of Mathematics Programmes (JUMP and IMPACT)

# *Last updated Dec 2014.*

The Centre recently evaluated the implementation (in the 2013/14 school year) of two ‎programmes ‎designed to improve mathematics achievement in primary schools.  The project was ‎co-funded ‎by the Department of Education and Skills, Accenture, and Science Foundation ‎Ireland.  The ‎programmes were JUMP Math (Junior Undiscovered Math Prodigies) and ‎IMPACT Maths ‎‎(Interactive Methods and Practical Approaches to Communication and ‎Thinking).  JUMP is a ‎Canadian-designed programme intended to help children succeed at, and ‎enjoy, learning ‎mathematics.  Information about its underlying philosophy is available ‎at ‎[http://www.jumpmath.org/cms/](https://jumpmath.org/cms/).  IMPACT is a new programme developed by the ‎Primary ‎Development Service for Teachers, based on the Irish primary school ‎mathematics ‎curriculum.‎

The intervention was run under the auspices of a steering committee composed of ‎representatives ‎from the funding bodies, Galway and Athlone Education Centres, the ‎National Council for ‎Curriculum and Assessment (NCCA), Change Nation, and an expert in ‎mathematics education, ‎Dr Seán Delaney from Marino Institute of Education.  For practical ‎reasons, the evaluation was ‎limited to schools within the catchment area of two Education ‎Centres – Galway and Athlone, ‎and to Third-class pupils within the participating schools.  The ‎Centre’s evaluation: ‎  
‎•    Reviewed the key characteristics of the programmes and related materials  
‎•    Evaluated the fidelity with which participating schools implement the programme  
‎•    Established the effects of each programme on the mathematical achievement ‎and attitudes of ‎pupils in participating schools  
‎•    Established the effects of each programme on teachers’ mathematical ‎knowledge, teaching ‎practices, and attitudes in participating schools.‎  
Participants (22 schools, 27 classes and almost 600 pupils) were assigned to one or ‎other ‎programme in a manner that maximised comparability on key features such as ‎school ‎location and pupils’ previous mathematics achievement.  All pupils were administered ‎the ‎DPMT Level 2 at the start of the 2013/14 academic year and the DPMT ‎Level 3 at the end ‎of the year.  ‎  
Programme materials were reviewed, using a framework that compared content ‎covered and ‎cognitive demands placed on pupils.  Observation of mathematics lessons ‎taught by teachers in ‎each programme were used to establish the fidelity with which ‎participating teachers ‎implemented the programmes, and to identify differences in ‎practice that emerged between the ‎two groups of teachers.  Interviews with teachers and with ‎pupils, accompanied by start- and ‎end-of-year questionnaires (including a mathematical ‎knowledge questionnaire for teachers), ‎examined changes in attitudes, behaviour ‎and knowledge related to mathematics. The final report on the evaluation has been released and can be accessed [here](http://www.erc.ie/?p=287).‎

# European Policy Network – Literacy

A combined Educational Research Centre/St Patrick’s College grouping is part of a ‎consortium, headed by the University of Koln, Germany, which has been awarded a two-‎year grant by the European Commission to establish a European Policy Network of National ‎Literacy Organisations’ (ELINET). The Centre is likely to be asked to work on additional ‎analyses of PIRLS 2011 data for European countries that will then feed into policy ‎deliberations. The Project will run for two years from February 1st, 2014.

# Development of a Resource Allocation ‎Model for Special Education Needs

# *Last updated July 2016.*

A National Council for Special Education (NCSE) Working Group published a proposal in ‎June 2014 to improve how schools are resourced to support students with special educational ‎needs (see ‘A Proposed New Model for Allocating Teaching Resources for Students with ‎Special Educational Needs’ at [www.ncse.ie](http://www.ncse.ie/)) ‎

The proposal consists of a baseline component, which allocates a certain amount of teaching ‎resources based on a school’s total enrolment, ensuring a minimum allocation of resources to ‎all schools.  In addition, the model will include a number of other components, to ensure that ‎additional teacher posts are allocated to schools on the basis of each individual school’s need ‎for support. Based on national and international research, the Working Group has identified a ‎set of criteria that indicate a school’s need for additional teaching resources.  These include (i) ‎the number of enrolled students with very complex special educational needs, (ii) the number ‎of enrolled students with low levels of academic achievement, and (iii) the school’s socio-‎economic context.  The Department of Education and Skills (DES) asked the Educational ‎Research Centre (ERC) to assist in the collection of data in relation to the third of these.

In September 2014, the ERC began the process of gathering the information required to ‎develop the new model. As part of this process, a social context survey was developed at the ‎ERC for distribution to all primary and post-primary schools. Questionnaires focusing largely ‎on the socioeconomic characteristics of families served by schools were posted to all primary ‎and post-primary schools nationwide in the first week of September 2014. The data gathered subsequently assisted in the development of an educational profile for each school. Other aspects of the ‎educational profile of schools were constructed from information already held by the ‎Department or from information held by the NCSE. For example, standardised test data supplied annually by schools to the DES was made ‎available to the ERC to assist in developing an educational profile for each primary school. At ‎post-primary level, Junior Certificate Examination results were provided by the State ‎Examinations Commission for a similar purpose.  Accounts of the survey procedures at ‎primary level [(Weir & Denner, 2015)](http://www.erc.ie/wp/wp-content/uploads/2016/05/survey_primary_schools_2014_ncse.pdf) and post-primary level are available [(Weir & Denner, 2016)](http://www.erc.ie/wp/wp-content/uploads/2016/07/NCSE_survey_Post-Primary_schools_2014.pdf).‎ The Centre continues to be ‎involved in combining the different sources of data with a view to exploring various allocation formulae.