

For release 8 a.m., December 18th 2017

New report highlights need for greater support for science teaching at primary level

The Educational Research Centre (ERC) today launched a report describing the teaching of mathematics and science in primary school classrooms. ***Inside the primary classroom: What happens in Fourth Class?*** was written by Aidan Clerkin, Rachel Perkins, and Emma Chubb. It reports data collected for TIMSS 2015 (Trends in International mathematics and Science Study), one of the world's largest studies of educational achievement

It is based on the responses of teachers who taught the 4344 Irish pupils who took part in TIMSS 2015 at Fourth Class. It focuses on different aspects of maths and science teaching in Ireland, with international comparisons. These include:

- **Characteristics of Fourth Class teachers** (gender, age, teaching experience, qualifications).
- **Characteristics of the classroom** (class size, pupils with language difficulties).
- **Teaching practices** (instructional time, general teaching practices, teaching in maths lessons, teaching in science lessons, assessment of maths and science, availability and use of ICT in the classroom).
- **Teacher confidence and professional development** (confidence teaching maths and science using various teaching practices, confidence teaching maths and science content, participation in Continuing Professional Development, collaboration with colleagues).
- **Teachers' views of the working environment** (challenges of teaching, safe and orderly school environment, emphasis on academic success, career satisfaction).

Aidan Clerkin, one of the report's authors, said that "Ireland's participation in TIMSS gives us valuable information about the teaching and learning of science in primary schools. For example, the TIMSS data show that Fourth Class pupils spend less time learning science than their peers in any other participating country, and also that the time spent on science in Ireland has halved since 2011."

He noted that "Irish teachers reported much less confidence in teaching science lessons than when teaching maths. They also noted that participation in science-related professional development in the two years leading up to the survey was relatively rare, which suggests that there may be scope for additional support for teachers on this front."

Rachel Perkins, another of the authors, said "this study points towards a number of positive findings about teachers in Ireland, including high levels of satisfaction and confidence in teaching maths. It also highlights the positive work of teachers in improving maths and science achievement among the lowest performing children since 2011."

Notes:

About TIMSS

TIMSS is designed to assess the maths and science skills of students in Fourth grade (Fourth Class in Ireland) and Eighth grade (Second Year) in participating countries. In so doing, it aims to provide national and cross-national comparative information for policy-makers and educators. Fifty-six countries participated in 2015.

TIMSS is organised by the International Association for the Evaluation of Educational Achievement (IEA), a non-profit consortium of research institutes. The ERC managed Ireland's participation in TIMSS 2015 on behalf of the Department of Education and Skills (DES).

The current report is based on data arising from the most recent cycle of TIMSS, in 2015. TIMSS is repeated every four years, with the next administration due to take place in 2019.

Related reports

The current report, ***Inside the primary classroom: What happens in Fourth Class?***, will be followed early in 2018 by a sister volume (*Inside the post-primary classroom: What happens in Second Year?*) that will describe the teaching of maths and science for Second Year students.

These reports are the second and third volumes in the ERC's new Research Series, which began on December 11th 2017 with *Shaping Schools: What TIMSS tells us about education systems* (by Eemer Eivers and Emma Chubb).

These themed reports build on the initial national report that described the mathematics and science achievement of Irish students (at both Fourth Class and Second Year) in the TIMSS 2015 assessment. This report was released in December 2016:

- *TIMSS 2015 in Ireland: Mathematics and science in primary and post-primary schools* (by Aidan Clerkin, Rachel Perkins, and Rachel Cunningham).

TIMSS 2015 in Ireland showed that Fourth Class pupils achieved a mean mathematics score that was significantly higher than that of pupils in 37 countries, and significantly lower than pupils in only 7 countries. For science, Irish pupils significantly outperformed those in 22 other countries, and achieved a significantly lower score than their peers in 15 countries. For both maths and science, Irish pupils showed significant improvements in 2015 compared to four years earlier, in 2011.

The Research Series will continue in 2018. It is intended to make the findings of large-scale assessments such as TIMSS more accessible to the public through the regular publication of short reports, each focused on a specific topic.

More information

Inside the primary classroom: What happens in Fourth Class? is available for free download from www.erc.ie. More information about TIMSS, including previous reports, is available from www.erc.ie/TIMSS. The authors and title of the new report are:

- **Aidan Clerkin, Rachel Perkins & Emma Chubb. (2017). *Inside the primary classroom: What happens in Fourth Class?* Dublin: Educational Research Centre.**

Contact details

- Aidan Clerkin 01 8065 218 aidan.clerkin@erc.ie
- Rachel Perkins 01 8065 216 rachel.perkins@erc.ie
- Eemer Eivers 01 8065 203 eemer.eivers@erc.ie
- ERC 01 8373 789 / 083 8271738 timss2015@erc.ie