

EDUCATION AND SKILLS COMMITTEE

Scottish National Standardised Assessments Inquiry to assess the evidence base and the alternative approaches

SUBMISSION FROM Professor Christine Merrell

I would be happy to expand upon this written evidence in person, if required.

I am an experienced academic with a substantial publication record. My areas of research expertise include assessment development; monitoring attainment and progress in pre-school and primary schools; research methods and evaluation in education; the achievements of severely inattentive, hyperactive and impulsive young children.

Working within the Centre for Evaluation and Monitoring (CEM) at Durham University since 1996 (including directing the monitoring systems between 2009 – 2011 and directing research between 2011 and 2018), I have designed and developed assessments for children aged 3 – 14 years including assessments of reading, spelling, mathematics, English vocabulary, non-verbal ability and motor development. To date, the assessments which I have designed and developed have been taken by over 7 million children, including in schools within many Education Authorities in Scotland.

What information the Government's assessments can provide that contribute to improving the educational outcomes of children and young people

Development in the first few years of life is rapid, and it has long been suggested that the earlier interventions are implemented, the better. The progress made by children in their first year of primary school has a lasting impact. Children who make good progress in that year maintain that advantage up to the end of secondary school (see, for example: Tymms, P., Merrell, C. and Bailey, K. (2018). The Long Term Impact of Effective Teaching. *School Effectiveness and School Improvement*. 29(2), 242 – 261. <https://dx.doi.org/10.1080/09243453.2017.1404478>). In this study, Tymms et al. followed a cohort c45,000 children from the start of school up to the end of compulsory secondary education. Receiving an effective educational experience in the first year of primary school had a significant positive impact on children's long-term academic outcomes. No other school year was as important as that first one.

Baseline assessment is an essential component of monitoring progress across the primary phase, and the start of Primary 1 is a good starting point for monitoring. Providing teachers with high-quality information about their pupils' development linked to research-based effective strategies for teaching and learning will enable them to make the most of this crucial developmental period of children's lives. The early identification of potential special educational needs is important and whilst a single baseline assessment will not constitute a diagnosis of a specific problem, it can flag issues that can be followed up in more detail over time.

The evidence base for moving away from the Scottish Survey of Literacy and Numeracy (SSLN) and introducing standardised assessments at P1, P4, P7, S3

In addition to providing teachers with information to target their teaching appropriately and for the self-evaluation of their effectiveness, standardised assessments can provide a means to evaluate the impact of policy and standards over time. However, the use of an assessment to answer multiple questions requires caution. Information collected for one use (e.g. school accountability) may not be appropriate to evaluate the improvement of standards over time. For an expanded discussion of the potential issues, see Merrell, C. (2012) *Developments in Standardised Assessment: A perspective from the UK*. In Suggate, S and Reese, E. (Eds) *Contemporary Debates in Childhood Development and Education*. Pub. Routledge: London. The SSLN provides independent, representative data which is independent from other uses, for example school self-evaluation or accountability, and in that sense is valid for monitoring the Scottish education system to evaluate the impact of policy changes over time.

Using data collected through other independent systems can also provide a cost-effective means to monitor the education system. For example, CEM's monitoring systems, (see www.cem.org for more information). For an example of how this has already been done, see example, the report about what children know and can do in Primary 1, and progress during the first school year, recently commissioned by the Scottish Executive: Tymms, P., Merrell, C. and Buckley, H. (2016) *Children's development at the start of school in Scotland and the progress made during their first school year: An analysis of PIPS baseline and follow-up assessment data*. Research report for the Scottish Government. ISBN: 9781785448942. <http://www.gov.scot/Publications/2015/12/5532/0> . This report includes information about trends over time and a comparison with children starting school in Scotland with children in England. Reports such as this are valuable sources of information when evaluating impact of pre-school and early education policies.

In later years of primary school, it is possible to look at the pattern of learning, which can again inform policy. See, for example Luyten, H., Merrell, C. and Tymms, P. (2017). The contribution of schooling to learning gains of pupils in year 1 to 6. *School Effectiveness and School Improvement*. 28(3), 374 – 405. <http://dx.doi.org/10.1080/09243453.2017.1297312>. This study involves data from Scottish primary schools from CEM's monitoring systems.

In summary, historical data exist separately to the Scottish Surveys and the national assessments, some of which have been used to answer research questions which are relevant to the evaluation of policy.

International comparisons to understand similar and differing approaches used elsewhere

International studies provide another means of making comparisons with data collected through a sampling framework to achieve a representative sample. These cover several of the year-groups targeted by the Scottish Surveys.

The iPIPS study of children starting school (www.ipips.org) (start and end of Primary 1) includes samples of children from Brazil, Russia and South Africa, which can be compared with children in Scotland and England to help understand similar and different contexts and approaches to education.

A study by Aloisi and Tymms (2018): *PISA trends, social changes, and education reforms*, Educational Research and Evaluation, DOI: 10.1080/13803611.2017.1455290, examined the stability of educational test results from the Programme for International Student

Assessment (PISA) over 15 years. The test results were remarkably stable, with correlations of up to 0.99 for country-level results over 2 cycles. Despite this stability, trends were observed with scores generally rising year on year, but these were very largely explained by rises in the socioeconomic indicators. Very careful statistical analysis tried and failed to find changes in PISA scores which could be linked to policy changes. Case studies suggested that the most optimistic estimate of the impact of reforms on test scores amount to about an annual effect size of around 0.02.

International studies provide detailed information about children and young people in Scotland and have the added benefit of including comparisons with other countries.