

Research Note:
*The Collaborative Institute for Education Research,
Evidence and Impact (CIEREI)*

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Overview

Building on Bangor University's long and extensive history of world-class research on interventions for the benefit of children, and more recent successful research collaborations with GwE (the Regional School Effectiveness and Improvement Service for North Wales), we recently formed the Collaborative Institute for Education Research, Evidence and Impact (CIEREI). CIEREI is a collaborative, bilingual, multi-disciplinary institute for the creation of research evidence with the primary aim of positively impacting learning and well-being for children through schools, and to contribute to teacher education and building regional capacity in co-constructed close-to-practice impact research.

The aims of CIEREI are to build a research institute in collaboration with GwE (and their external providers) to promote an active research-informed culture across schools in north Wales. CIEREI represents a formal strategic partnership between GwE, Bangor University (led by the Schools of Education and Psychology), local education authorities, schools, the University of Warwick (CEDAR), The Future Generations Commissioners Office for Wales, School of Education, University of Chester, and other stakeholders invested in improving educational

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outcomes and the well-being of our children. CIEREI has the status of 'institute' within the university system because one of the main aims is to bring a more formal working relationship between a number of schools and centres in the university (e.g. psychology, education, sports science, healthcare science, law, Centres for Evidence-based Early Intervention, Centre for Mindfulness Research and Practice, Miles Dyslexia Centre, Bilingualism Centre, Bangor Literacy Lab), the Centre for Health Economics and Medicines Evaluation (CHEME), and the work GwE and collaborating external providers undertake across north Wales. This is an exciting relationship that aims to build an international education research profile through the fusion of a critical mass of university researchers and academics across a number of Bangor University colleges and schools, educational practitioners, GwE and 439 schools in the region, with the common aim of developing international level research in the evaluation of educational practice, designing and evaluating educational interventions and improving outcomes for the children of Wales.

One of the strategic aims is to build capacity across the north Wales education system to help teachers and school leaders understand and apply a greater range of evidence-based practices, and to create an environment where teachers and educators are supported to innovate and evaluate educational practice (Organisation Economic Co-operation and Development (OECD), 2017; Welsh Government, 2014a). In the medium to long term, CIEREI aims to continue to help build a vibrant research community that lays the foundation that feeds directly into current educational practice, initial teacher education (ITE) programmes and on-going professional development of teachers. This will help ensure that all teachers understand research, best evidence practice and will help to foster a 'scientist-practitioner' mindset within education settings. On a national level, the aim is to support the vision of the Welsh Government's *Qualified for Life* initiative (Welsh Government, 2014a), and to contribute to existing 'what works' guidelines to support schools in improving outcomes for pupils. Through the expansion and diversification of collaborative school projects, we aim to accumulate an evidence base of cost-effective programmes for schools. CIEREI also addresses the concerns of the Furlong Report (Furlong, 2015). The report highlights the need for universities to lead on education research if they are to deliver effective teacher training.

Over the last year we have co-constructed a number of small- and large-scale close-to-practice research studies with local schools. In developing

the collaborative working model, we co-construct research projects with input on the aims, design and implementation with university researchers, GwE officers and key school personnel who have a lead role in the schools for implementation. This model of co-construction helps to ensure that we keep the research relevant to current classroom, school and national priorities, but also maintain a research rigour that helps to build an evidence base. Combining researcher interests with GwE and school priorities for educational attainment works towards our broader aim to progress from small studies to larger scale effectiveness and, ultimately, to large-scale implementation of evidenced-based interventions that could work in real-world settings without researcher support. Below we give an overview of four of our flagship co-constructed collaborative projects.

1. NorthWORTS-North Wales Online Reading Trials Studies (E. J. Tyler, S. Roberts, R. Watkins, R. Hastings, A. Hulson-Jones and C. Hughes)

For a number of years we have been interested in developing cost-effective evidence-based approaches to supporting schools in helping children learn to read. In 2016, we co-constructed a large cluster-Randomised Control Trial (cRCT) across thirty schools in north Wales, investigating the effectiveness of an online reading programme called Headsprout Early Reading. This research was building on a number of smaller scale studies that we had conducted in local schools over a number of years, with the focus usually on children who are starting to experience difficulties with reading and those most at risk. Our findings from the small-scale studies, and this first cRCT, suggest that the programme leads to good outcomes (medium- to strong-effect sizes). In addition, the focus of the first cRCT was investigating the effects of ongoing implementation support and the impact this has on outcomes. Interestingly, our initial analyses suggest the programme was relatively robust in effectiveness whether or not schools receive ongoing implementation support. Following this initial cRCT, in July 2017 we developed a further cRCT study across twenty-four schools investigating the effectiveness of the Headsprout programme for use by parents at home with support from their school. The results of this study are currently being analysed. In the 2017–18 school year we have started a large trans-regional implementation study of the Headsprout programme. Our ultimate aim with the NorthWORTS programme is to enable all schools across Wales to use the Headsprout programme to supplement their school's efforts to support our 'every child a reader' mission.

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2. Increasing Early Basic Maths Fluency (*S. Hunter, K. Owen, R. Watkins, M. Beverley, R. Hastings and C. Hughes*)

Over the last decade or so the research team has been running small-scale projects in local schools in north Wales investigating the impact of a low-tech approach to increasing basic maths skills fluency using a flashcard-learning procedure developed from Precision Teaching called SAFMEDS. We have consistently found strong evidence of the effectiveness of the approach in helping children learn basic facts, a core element of them building their knowledge of numbers and confidence in their ability in maths. Following a number of controlled studies that showed strong effects, we have recently started a large cRCT of the approach across sixty-five schools across the north Wales region, with over 650 children. The aim of this study is to investigate the effects of basic skills fluency and the importance of implementation support on the outcomes for children.

3. Re-thinking Educational Attainment and Poverty (*G. S. ap Gruffudd, L. Spencer, J. Payne, A. Wilde, R. Watkins, S. Jones, E. Thomas, C. Hughes and B. O'Connor*)

The aim of the REAP research was to investigate the factors which effect poverty in rural education. The research was commissioned by the regional educational consortia ERW and GwE in February 2016 and was an eighteen-month study completed in October 2017. Data were collected during the 2016–17 academic year from 32,831 pupils, teachers, school managers and local authority officers across five separate phases of a mixed-method research project.

We found that there are multiple factors that affect educational attainment, and poverty is only one of these factors. In Phase 1, school managers discussed what schools are doing to tackle disadvantage and poverty within rural school settings in Wales to reduce the inequalities in education between those who are living in deprivation and those who have more means. One of the main findings for Phase 1 was that effort and pragmatic initiatives from teachers aid the engagement of disadvantaged pupils. Phase 2 showed that rurality does not confound the effects of poverty and issues such as additional learning needs, attendance and poverty are substantial predictors of educational attainment. Phase 3 findings added to the evidence that poverty impacts on children and young people's experience and enjoyment of education in school. Phase 4 provided evidence that there seems to be a disparity between national policy

directive on tackling poverty and how this is facilitated locally through local authorities. Phase 5 provided further evidence to reinforce the themes found in Phase 1. School managers from across twelve local authorities in Wales provided comments illustrating tackling poverty is a complex issue, and should include engagement with cultural issues, the aspirations of parents, the culture of benefits and the need to recognise and understand that many parents work long hours in low-paid jobs in Wales, and have limited time to spend undertaking educational type activities with their children. We also made recommendations regarding the way forward in tackling poverty and educational attainment.

4. Leadership and School-improvement Evaluation (*N. Callow, T. Du Preez, J. Charles, R. Tudur-Edwards, E. Thomas, R. Hughes, R. Watkins and C. Hughes*)

One of the strategic goals of GwE as the improvement services for north Wales is to help support and develop leadership capacity across the region. In 2017 we started a collaborative partnership project with leadership experts from the School of Sport and Health Studies, Bangor University, to help evaluate the effectiveness and impact of the GwE middle leadership. The project aims to provide objective evidence of the effectiveness of the leadership programme that will feed into the Welsh Government priorities and the further development of leadership training for schools. Additionally, we have engaged with expertise from CHEME, in the School of HealthCare sciences, Bangor University, to develop a novel approach to migrating developed methodologies of evaluating impact from health economics to evaluate improvement projects across the GwE region. There are few examples of using these methodologies in education research, and we hope that this will provide a new level of analysis in evaluation of impact of a range of improvement projects.

Next steps

The mission of CIEREI is to improve the outcomes and well-being of children in Wales through research. This represents an ambitious goal that will involve a strategic collaboration with all stakeholders across Wales who share this vision. Our current priorities are supporting and developing the capacity to conduct and implement close-to-practice research in

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schools across north Wales. This represents a strategic collaboration with GwE and local schools but represents an exciting time in helping to build a world-leading research-driven education system in Wales.

References

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