

What can we learn about reading attainment in North East England?

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This article discusses a forthcoming study which will be focusing on factors which influence reading attainment in North East England. This region is an outlier in UK national assessments; at the end of Key Stage 2, it is the highest attaining region outside of London, but the lowest attaining region nationally at GCSE. Government policy and other organisations have identified literacy on leaving school as a social issue. This study will therefore seek to address the question: What factors help determine the level of reading attainment in North East England? Here, an overview of current evidence relating to the region's attainment is given and gaps in current understanding are identified. This is followed by proposed methodology for the study, which will initially use data from PISA, PIRLS and the National Pupil Database. Finally, the potential impact of this research is discussed, with a focus on how this study will add to the current literature.

Keywords: regional attainment, reading, North East England, PISA

Overview

This article outlines my proposed PhD study which will seek to address the question: What factors help determine the level of reading attainment in North East England? Good literacy skills are associated with higher attainment across other national curriculum subjects and are correlated with higher life expectancy (Nunes et al, 2017; Gilbert et al, 2018), and in the English education system increasing importance is being placed on reading in secondary and particularly primary schools. Attainment in the North East has been a policy issue, with £24million recently invested in the government's Opportunity North East programme, and other initiatives such as the Education Endowment Foundation's 'North East Primary Literacy Campaign' and the National Literacy Trust's 'Read North East' programmes aiming to improve literacy in the region (Gov.uk, 2018; EEF, n.d.; National Literacy Trust, 2017).

The study will conduct a rapid systematic review of evidence, and then analyse linked secondary data from the Programme for International Student Assessment (PISA) and the National Pupil Database (NPD) for regional patterns in reading attainment. In completing a study on this topic, a better understanding of low achievement in a region of high deprivation such as the North East will contribute to knowledge in education and in wider social services. As a conclusion, the study will consider what current policy and provision is doing to improve reading attainment in the North East, whether this is likely to address issues highlighted by the findings, and what might be done in the North East and other areas such as coastal regions and the West Midlands.

Background

As Figure 1 shows, at the end of Key Stage 2, the North East has among the highest percentage of pupils reaching the expected standards in literacy assessments (DfE, 2018b).

On the other hand, at Key Stage 4, the North East clearly has the lowest Attainment 8 and Progress 8 scores for English Language (DfE, 2018a). In short, there is a stark difference in the North East's performance in national assessments at the end of primary school compared to the end of secondary school. Ofsted inspection results reflect this pattern (Watchsted, 2018). According to the National Literacy Trust, only London has more wards in the top three deciles of literacy vulnerability in England than the North East (Gilbert et al, 2018).

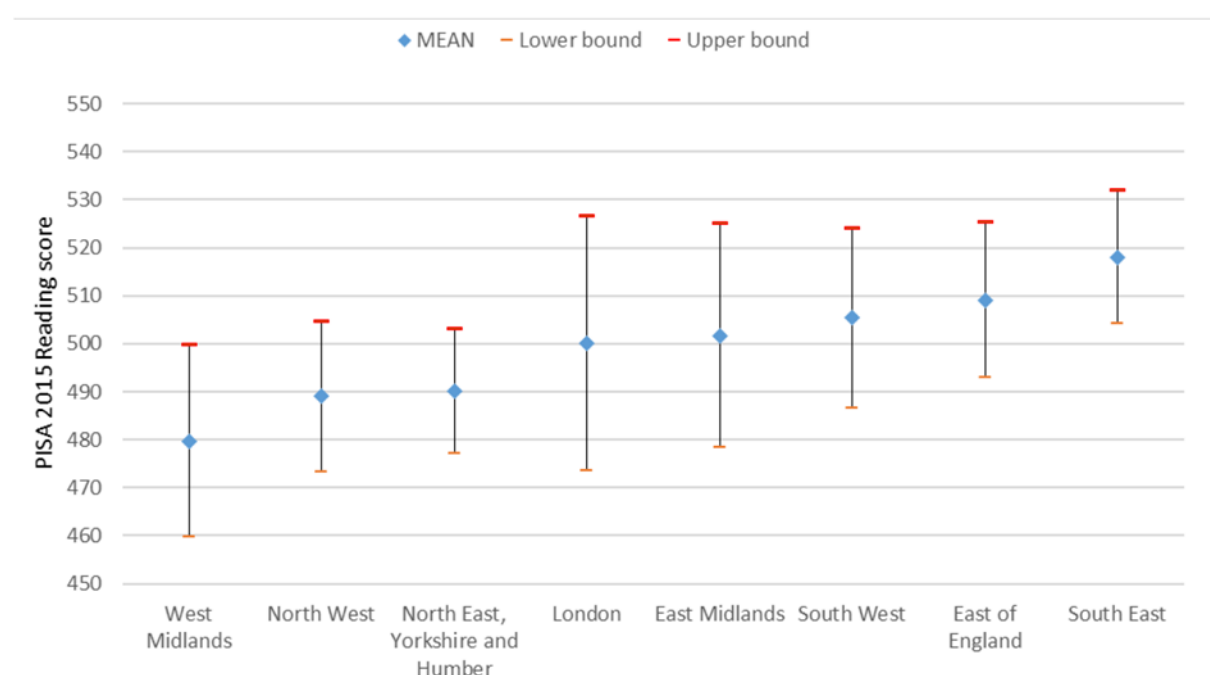
Figure 1: Results by region for pupils at end of Key Stages 2 and 4 (DfE, 2018a; Dfe, 2018b)

Region	% Pupils achieving expected standard in Reading at KS2	% Pupils achieving expected standard in G,P,S at KS2	Attainment 8 Score for English at KS4
Inner London	82	86	10.5
London	81	86	10.6
Outer London	81	86	10.6
North East	81	85	9.5
South East	81	82	10.1
North West	79	83	9.7
South West	79	81	9.9
East	78	80	10.0
West Midlands	77	82	9.7
East Midlands	77	81	9.7
Yorkshire and Humber	76	80	9.6

Internationally, the recurrent Progress in International Reading Literacy Study (PIRLS) presents results for pupils in Year 5, whereas Programme for International Student Assessment (PISA) presents results for pupils aged 15. These international assessments are often cited by government ministers and are used for policy purposes. Since 2006, UK results in these tests have been fairly stable across all subjects, with the UK performing around the OECD average in PISA and above average in PIRLS for reading (NFER, 2018; Jerrim and

Shure, 2016; McGrane et al, 2017; OECD, 2016; IEA, 2017). Despite the importance of these assessments politically, little research has been done using these data at a regional level. For example, Machin et al. (2013) used international data but compared the four UK nations rather than exploring patterns at a regional level. Where these data have been explored at a regional level, in PISA 2015, the North East mean score was among the lowest regionally for reading (Figure 2). Jerrim et al (2017) found a similar pattern to the data found in Figure 1 in mathematics, with high Key Stage 2 and low Key Stage 4 data, and considered this pattern of attainment worthy of further investigation. An equivalent study for reading has not been suggested or completed so far. This new study will fill the gap.

Figure 2: PISA 2015 results by region (Results matched to NPD) (DfE, 2017)



Nationally, reading is becoming an increasingly important focus of policy; reforms in the National Curriculum in 2014 introduced a greater emphasis on phonics and on knowledge, considering that this reading approach will ‘raise standards’ in schools (DfE, 2015; DfE

2013a; DfE 2013b; DfE 2013c; Marshall, 2017). Moreover, Ofsted has suggested that Key Stage 3 is being overlooked in favour of year groups taking examinations, with inspectors noting examples of slow progress and lack of challenge in English lessons (Ofsted, 2013). A Department for Education report has concluded from national data that progress in Key Stages 2 and 3 is non-linear and non-continuous, but could not explain the reasons for this (DfE, 2011). Hence, there seems to be a mixed picture in national and international assessment data, which warrants further investigation, particularly given the unique pattern found in North East England.

What might the explanations be for differing attainment between regions of the UK at various school stages? Gorard and Smith (2004) argue that there is no evidence that *equivalent* students attain differently in different parts of the UK. This point is further highlighted by Gorard (2018), finding that differences in attainment were predominantly due to pupil characteristics. Alternatively, using data from international assessments, Creese and Isaacs (2016) have identified school-level factors such as centralisation, lack of curriculum integration, and high-stakes tests as flaws in the English system, though the time lag in this data means the full extent of these policy changes are not yet present in data. These are factors that this proposed study will need to consider.

Methods Proposed

To address the factors determining reading attainment in the North East, the following sub-questions will need to be considered:

- What do the major patterns of student attainment in the North East look like?
- How do they compare to other regions of England?

- Are these differences linked with schools types and/or student characteristics? If not, what are the other likely determinants?
- What are the implications for policy and practice in the NE and beyond, and what can be learnt about evidence-led policy-making?

The study will start with a rapid review of the existing literature on the pattern of relative attainment in the NE (high at primary, low at secondary), looking for possible explanations that can be investigated further with the secondary datasets. Search terms will be created and data extracted from included research reports before synthesis. Terms will allude to key themes related to issues of interest linked to the research questions above such as regional differences in outcomes, transition, deprivation, school intakes, reading assessments, SATs, and pupil characteristics. This literature review will inform the secondary data analysis which will follow.

The initial emphasis of this study will be on analysing existing secondary data on reading attainment, with variables for analysis to be determined by the research questions and the review of existing literature detailed above. The scale and availability of secondary data makes it a useful but often under-used resource for researchers, one which can help overcome limitations of other data and where data is already available it is ethical to ensure that this is included in a preliminary investigation (Gorard, 2012; Gorard, 2002). Large-scale secondary datasets can work in tandem with other data to support power analyses (Smith, 2008; Smith, 2012; Gorard, 2002). From the outset, I will need to review what each of the relevant secondary data sources can tell us, including national SATs and GCSE results, the PISA database, and the PIRLS database, beyond the main headline findings aforementioned. I will need to form links between these various sources to form an overall picture of what can be

learned. In bringing together different sources of information in this way, my findings will be stronger, and any discrepancies within this information can be explored later in my study. By doing this, I will be able to discern patterns of student attainment in North East England, and compare these patterns to other regions using the data collated.

The main domain in PISA 2018's survey is reading, so the data released in December 2019 will provide a comprehensive overview during this initial data analysis, with more data items being included related to reading. Using the data from a survey where reading is the main domain will ensure that I can gain the most relevant and up-to-date information on students who will still be in the UK education system. It is essential that data from these sources are understood fully, that their limitations are acknowledged, and that these data are not misinterpreted as has at times been the case (Gorard, 2001). The most recent PIRLS data is from the 2016 survey, and this will also be an important resource; during the course of the study, the PIRLS 2021 data will be released, and I will be able to note any differences in results as I make my conclusions.

Nationally, Key Stage 2 and Key Stage 4 data will continue to be released on an annual basis. Matching PIRLS and PISA data to the NPD will enable me to discover whether the patterns of reading attainment described in the Background section are present in data from independent surveys conducted by the International Association for the Evaluation of Educational Achievement (IEA) and the Organisation for Economic Co-operation and Development (OECD). The timing of this study allows for the most recent international data to be included, and for the National Curriculum changes in 2014 to have been fully implemented in English schools. Assuming there are no further curriculum or assessment changes, this means it is a suitable time to complete a study of this topic. Moreover, current

literature has not used the full extent of data available nor linked international data to the NPD to focus particularly on the North East England region and on reading attainment. All data will be held confidentially, and no individual or organisation will be identifiable.

In order to assess whether school or student differences explain the patterns I find or whether there are alternative explanations, I will need to consider and test to some extent each possible explanation using complex regression modelling. For example, I will need to consider the idea that national assessment data are flawed, particularly in relation to discrimination between performances in Key Stage 2. Measures will need to be considered carefully to avoid identifying the wrong targets and adding unfairness. Regression models will also be suggest any further causal relationships between these independent variables and reading attainment. Any further analysis needed in order to answer the research questions will be decided based on these findings. Ethical considerations will be revisited throughout the study period, and particularly after the initial data analysis when further data will be needed. This will be done with reference to University and to British Educational Research Association's (BERA) Ethical Guidelines (BERA, 2018). At this point, it is important not to bias the study by assuming what the results of the initial data analysis will be; hence, it cannot be stated here what further analysis will be needed beyond that mentioned.

Outcomes

This particular line of research has not been extensively investigated before. Reading is a high priority in current curricula and policy, and the linked data which will be used in this study will be either new or from the most recent secondary datasets available. It will produce good measures of contextual disadvantage based on data from large-scale datasets which will help to identify targets for stakeholders and policy makers. This adds weight to the choice to

research this topic, and should help with trying to disseminate findings. Working with other partners will help with dissemination of findings, something which is already under consideration and being worked towards. Additionally, a successful exploitation of this plan could bring up further questions for research, and provide a model of a suitable research design for further studies on other similar topics such as attainment in science or mathematics.

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