

From: EPS - Ops Team, Welsh Government
Sent: 23 January 2017 12:21
To: DENI, DfE, 'Jerrim, John'
Cc: KAS, RM Results
Subject: RE: PISA 2015 further analysis

Hi all,

Many thanks for putting this together, Welsh Government (WG) comments added in red.

Happy to discuss on Wednesday

Kind Regards

EPS – Ops Team

From: DfE
Sent: 20 January 2017 18:08
To: DENI, EPS - Ops Team, Jerrim, John
Cc: KAS, RM Results
Subject: RE: PISA 2015 further analysis

Hi John, All,

We met on Tuesday to discuss our revised request for additional PISA analysis and agreed that we would send John and Sam a more detailed commission that focusses on:

1. A more detailed analysis of the highest and lowest performers in PISA 2015 in each of Northern Ireland, Wales and England.
2. Best estimate calculations of PISA scores by GCSE grade / the PISA-GCSE link in England and Wales with an accompanying note outlining caveats/considerations for a more in-depth analysis;
3. Best estimate calculations of (limited) regional performance in England and Wales and Northern Ireland with an accompanying note outlining caveats/considerations for a more in-depth analysis.

- As discussed in previous meeting - items 2 and 3 would be first areas of work completed by John

I am afraid I haven't managed to draft a more detailed scoping doc for these projects, but am sharing some thoughts below and will aim to share more detailed docs on Monday next week. My thoughts for each are:

For 1) High/Low performers: It might be sensible to aim to produce a note that looks and feels like an additional chapter to each countries' national report on this topic, that explores the characteristics and other background school- and pupil-level information about those pupils scoring below PISA level 2 and those achieving PISA levels 5 and 6. The analysis should focus on the science results, but additional tables would be of interest documenting the equivalent figures for maths and reading. Key research questions include:

- How do the characteristics of low- and high- performing students in PISA compare to their peers in England/NI/Wales?
 - Are they clustered in schools or distributed across schools?
 - Which factors play a key role in determining whether a pupil is a high- or low-performer in each of England/NI/Wales?
 - Can we identify from item level data which types of items pupils particularly struggled with / did well on compared to their peers?
 - In which countries internationally was a significant reduction/increase in high- or low-performers observed between PISA 2015 and previous cycles?
 - Are there any policy messages that can be drawn from any of the above?
- **WG happy with this and with NI preferences being the priority here as agreed.**
 - **Of the suggested key questions: Item level data on which items/types of items pupils particularly struggled with / did well on would be of most interest to us as well as the factors playing a key role in determining high/low performance.**
 - **High performers are our preference to examine.**
 - **In terms of priority order of PISA domains – WG's would be first Reading (given our girls relatively low performance as per our national report and that it's main domain next time), then Science, then Maths.**

NB: If there is little time, then the priority should be on NI's results for this work.

For 2) GCSE link: Information Redacted Speaking for England only give your best estimates of:

- average PISA scores by GCSE grade for pupils within the matched datasets;

- a mapping between PISA levels and GCSE grades that might be used to provide a rough indication of how pupils in other countries would have performed if they sat our GCSEs (this is what the excel tables are designed to do).

John – we now hold the GCSE linked data in DfE. This is in a text file that you can import into a stats package. The datasets hold information on all pupils in the relevant GCSE cohort with the PISA student ID used to identify the pupils in the PISA sample in England. What is the best way for me to transfer these files to you so that you can link this information back into the pupil dataset that you hold?

- WG priority is the first item - Average scores by GCSE grade for pupils / distribution of PISA levels by GCSE grade within the matched datasets.
- Please note that we require this to be completed for BTEC Science in addition to GCSE.
- Assuming that John won't be able to do something re. grade drift for us given that doesn't have previous datasets. However, if the methodological advice could contain how 2015 was done, might be done for previous rounds and also repeated in future then that would be helpful.
- We also now have the linked data available in WG so same question to John re. best method of transferring files?

For 3) regional estimates: A set of averages and accompanying confidence intervals for each Government Office Region in England (and appropriate regional splits in Wales and Northern Ireland), with a note explaining caveats and considerations for further analysis.

- Regional split WG would like is by Consortia

As I said above, I will look to turn this into something a bit more concrete at the beginning of next week. Bethan has also put some more time in diaries for us to discuss in more detail.

Happy weekend all,

Department for Education

From: Jerrim, John
Sent: 02 February 2017 07:22
To: EPS - Ops Team, DENI, DfE

Cc: Shure, Nikki
Subject: Re: PISA 2015 Project Board

Hi all.

As promised, a document outlining the final few bits and pieces that Nikki and I are going to work on. Any questions / issues please let me know.

Best wishes

John

Final pieces of work

1. Regional reports

Estimates of PISA scores by the following regions in England, Wales and Northern Ireland.

England: London vs non-London; Government Office Region; Opportunity areas

Wales: Welsh consortia and urban/rural (if possible)

NI: NUT3 regions

The results will be reported back using Excel files. There will be a generic one-page summary to accompany this, discussing the caveats, limitations and how it might be taken forward to get better estimates in the future.

We aim to send this to governments by March 10th.

2. Collaborative Problem Solving results

An Excel table will be provided, illustrating the average CPS score by country, along with the 95% confidence interval. *We aim to send this to governments by March 10th.*

3. PISA-GCSE link

In England and Wales, Excel tables will be generated looking at the link between PISA scores and GCSE grades. This will include (a) average PISA scores by GCSE grade and (b) cross-tabulations of PISA levels against GCSE grades. Results will be reported back using Excel tables. This will be accompanied by a one/two page discussion of the limitations, and how this work could be improved in the future. *We aim to send this to governments by March 10th.*

4. Factors associated with high and low achievement

We will investigate the factors associated with high and low performance using the PISA data. This will particularly focus upon potential 'drivers' of high and low achievement. As the background questionnaire includes many questions focused specifically upon science, this is likely to be the focus of this work. This will be written up in a 10 to 12 page document which will cover the following:

- a. How has the proportion of high and low achieving pupils changed across the four UK countries since 2006?
- b. Which countries have seen large changes in the percentage of high and low performing pupils over time?
- c. What are the school and pupil demographic characteristics of high and low performing students in the UK?
- d. What factors seem to influence high and low performance, with a particular focus upon providing evidence that could point towards ways policy or practise might change.

We aim to send this to governments by March 17th.