



# CROS and PIRLS 2013: workshop

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## Are my results representative?

- Nationally, CROS samples about  $\frac{3}{4}$  of the entire RS population, and obtains 26% response rate within this.
- Locally, you have a 'voluntary response sample'...  
...may not be representative but survey asks relevant questions of relevant people, so the responses are important/interesting
- Nationally, additional confidence through comparison with HESA data on 'researchers' / 'research-only' staff; use local data to compare with characteristics in response sample
- 26% is a good response rate for socio-economic surveys

*Caution! Some local population estimates look awry... (esp PIRLS)*

## Should I use statistical tests?

- As a local sample is unlikely to be representative, *there is little point in using statistical tests* like t-tests or significance measures
- More valuable to look at broad trends
- Use basic cross-tabulations to find them

# Confidence intervals

- Effectively the size of the ‘error bar’, for a 95% confidence level, *from a random sample*
- Just under 1% for national aggregate, so a difference of 2% is significant; i.e. 34% in 2013 is different from 32% in 2011 (just)
- Typical local sample confidence intervals:

Sample	Target	Conf interval
8216	32,000	< 1 %
270	900	3 – 5 %
160	600	4 – 7 %
60	170	6 – 10 %

Handy calculator - <http://www.surveysystem.com/sscalc.htm>

# Are my results comparable with 2011?

- Read the small print in report Appendix results tables!  
*“Results from CROS 2011 are shown [x] only where questions were comparable and where there was a difference between the 2013 and 2011 results. Underlined text indicates where question wording was different from CROS 2011”*
- Comparability obviously stronger where no change, but comparisons where there is some change are still valid provided note made
- CROS: Many questions are comparable but watch for minor revised wording, options and a few different scales (a few new questions)
- PIRLS: sections A and D-F mostly comparable (but some new Qs). Sections B and C are new, establishing more robust understanding of PI attitudes and perceptions than 2011.

Handout gives detail of question changes and analysis tips...

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# Should we include incomplete responses?

- Probably better to include them (no obvious reason not to), despite national use of complete responses only
- CROS 2009 found no difference between responses of completers and non-completers to the questions they did both answer...
- State honestly the policy followed, and explain why the number of responses falls through the questionnaire
- Interesting to see where they tended to stop...
- 80% completion is pretty reasonable in surveys

# CROS Reporting structures

- ✔ 'Questionnaire' sequence  
*Appendix 1 ...; easy to find data; not intuitive*
- ✔ By Concordat Principle  
*CROS 2011 & 2013; useful for Concordat progress measures*
- ✔ Thematic  
*CROS 2009; potentially most logical; okay for local comparison*

**PIRLS:** largely thematic

# Analysis tips and tricks

## ✔ Scales

Decide whether to include or exclude 'not applicable' (etc)  
(critical for PIRLS sub-population comparisons)  
Excel stacked bar charts automatically normalise...  
Consistent combination of options

## ✔ Cross-tabulations

Safest in SPSS (etc, to group or remove options)  
Watch for any 'tick all options' questions  
2<sup>nd</sup> order (e.g. gender and age) needs large sample

## ✔ Handout

explains aggregate report process