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Online assessment in primary schools in Ireland: One decade ends, another begins

Jude Cosgrove

(with Jean-Philippe Riviére (Wiquid), Aidan Clerkin, Adrian O'Flaherty and Gerry Shiel (ERC))

FLIP meeting, 6-7 June 2019, Roma

Overview

- Online assessment in national policy context of standardised testing
- Standardised testing at primary level – recent developments
- Overview of ERC's Drumcondra Online Testing System (DOTS)
- Challenges
- Potential solutions
- Questions, comments, experiences of other countries

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National context: the past decade

- PISA 2009 - attracted considerable media attention and commentary in Ireland. Reading -38 points, maths -16 points, science no change

Irish Times: '**shattering the myth** of a world-class education system' (December 8, 2010)

Irish Independent commented: '[T]here was **shock** last year when it emerged there was a fall in reading and maths scores for Irish students in the PISA' (April 3, 2012).

Education Matters described the results as 'an **urgent** call to action' (December 14, 2010)

[Recent research demonstrates issues with modelling missingness but that's an aside!… See Sachse, Mahler & Pohl, 2019: *When Nonresponse Mechanisms Change: Effects on Trends and Group Comparisons in International Large-Scale Assessments* https://journals.sagepub.com/doi/abs/10.1177/0013164419829196].

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National context

- (part of) Policy response to PISA 2009: *National Strategy to Improve Literacy and Numeracy among Children and Young People (2011-2020)* https://www.education.ie/en/Publications/Policy-Reports/lit_num_strategy_full.pdf

Includes a range of actions and targets, some linked to PISA, e.g., one target is to:

Increase the percentage of 15-year old students performing at or above Level 4 (i.e. at the highest levels) in PISA reading literacy and numeracy tests by at least 5 percentage points by 2020

- Also includes a range of actions concerning assessment. With respect to standardised tests schools must:

Collect aggregated data on student achievement on standardised assessment tests in English reading and mathematics in all primary schools and in Irish reading in all Irish-medium primary schools at the end of second class, fourth class and sixth class.

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National context

- The mandatory administration of standardised tests arising from the national literacy and numeracy strategy has had multiple impacts on the culture of assessment:

Decision to use test results as one criterion in determining the allocation of special educational teaching resources to schools could be interpreted as a move towards a higher-stakes model

See O'Leary, M. et al. (2019, May): *Standardised Testing in English Reading and Mathematics in the Irish Primary School: A Survey of Irish Primary Teachers*
https://www.dcu.ie/sites/default/files/carpe/carpeinto_standardised_testing_survey_may27_pdf.pdf

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National context

- Next steps…

ERC is one of the stakeholders (along with, e.g. NCCA and SEC – curriculum and state examinations bodies) to establish broad national strategy on assessment – due this autumn

Important exercise, given current fragmented landscape and complaints of initiative overload from teachers, pressures on student

Main point: assessment must be viewed in wider context and should be responsive to policy…!

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DOTS overview

- **Drumcondra Online Testing System** – tests and platform of the ERC
  - ERC and Mary Immaculate College both supply tests to the primary sector in Ireland
  - Schools receive grant aid to purchase tests and may choose to administer them on paper or online
  - At present, only ERC offers tests online (via DOTS)
  - Following standardisation, online tests available to primary schools for the first time in 2018-2019
  - This follows significant test redevelopment since the previous versions (2006-2007)
  - Also has online tests for 7th and 8th grade
  - All questions are MCQ
  - Paper – 2 parallel forms
  - Online – 3 parallel forms
  - Have national standard scores and %ile ranks

Grade level	Paper	DOTS
First	X	
Second	X	
Third	X	X
Fourth	X	X
Fifth	X	X
Sixth	X	X

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DOTS overview

- Fully integrated online tests system on which:

schools buy tests

teachers set up test sessions

students take tests

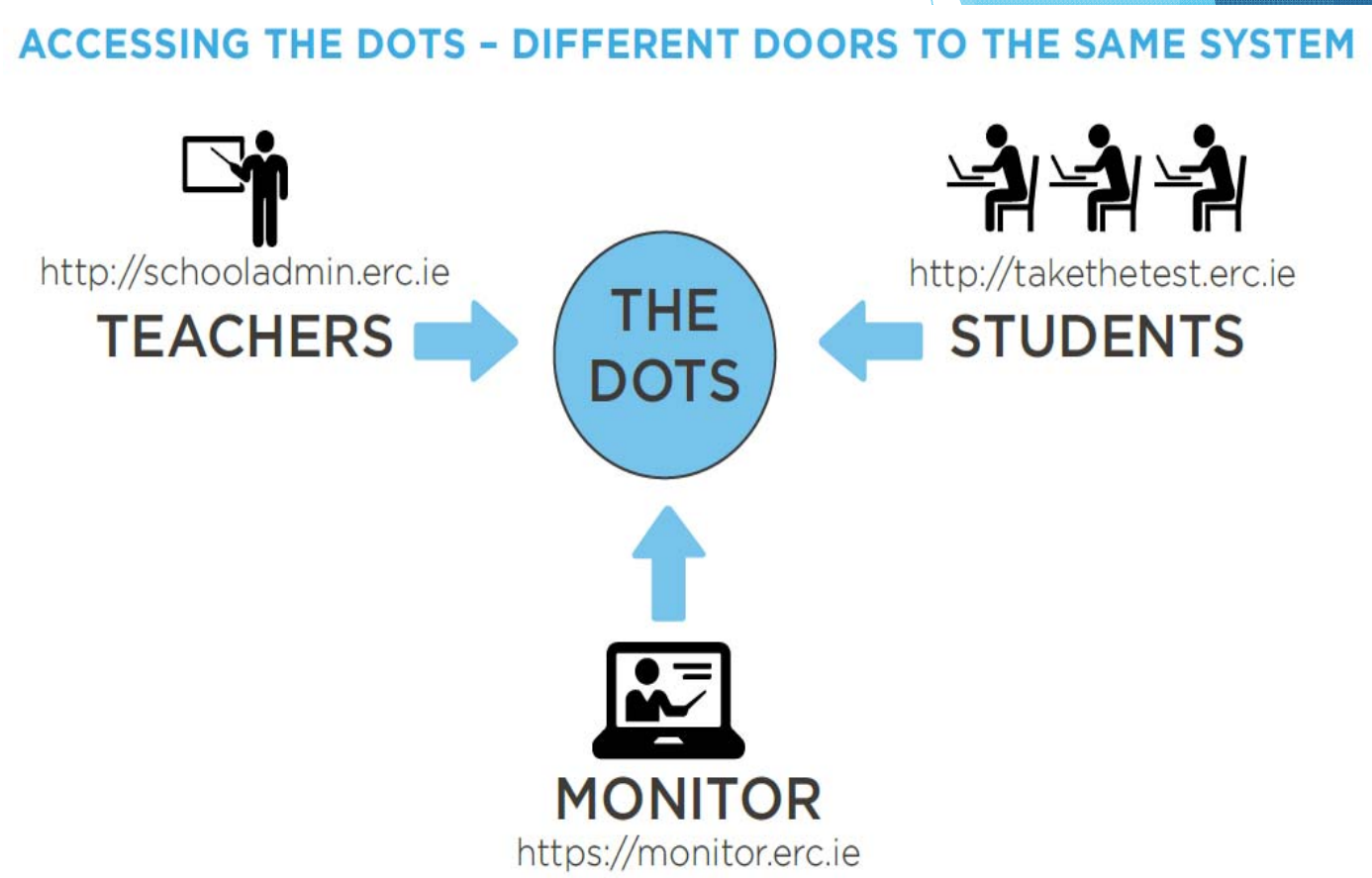
test administrators use *DOTS Monitor* to track students

can see live progress for each student

includes Help/Pause/Resume functions

teachers access results and reports

school training video



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Common features of all DOTS tests

- Two-tier login
  - Pupils log themselves in using individual password
  - When ready, administrator calls out a 4-digit group password
- Practice examples
- Built-in instructions to complement read-aloud script
- One question at a time on-screen
- Built-in timer and question tracker
- No forced answering
- At the end, can review all Qs or skipped Qs
- There is no escape function… No accidental finishing

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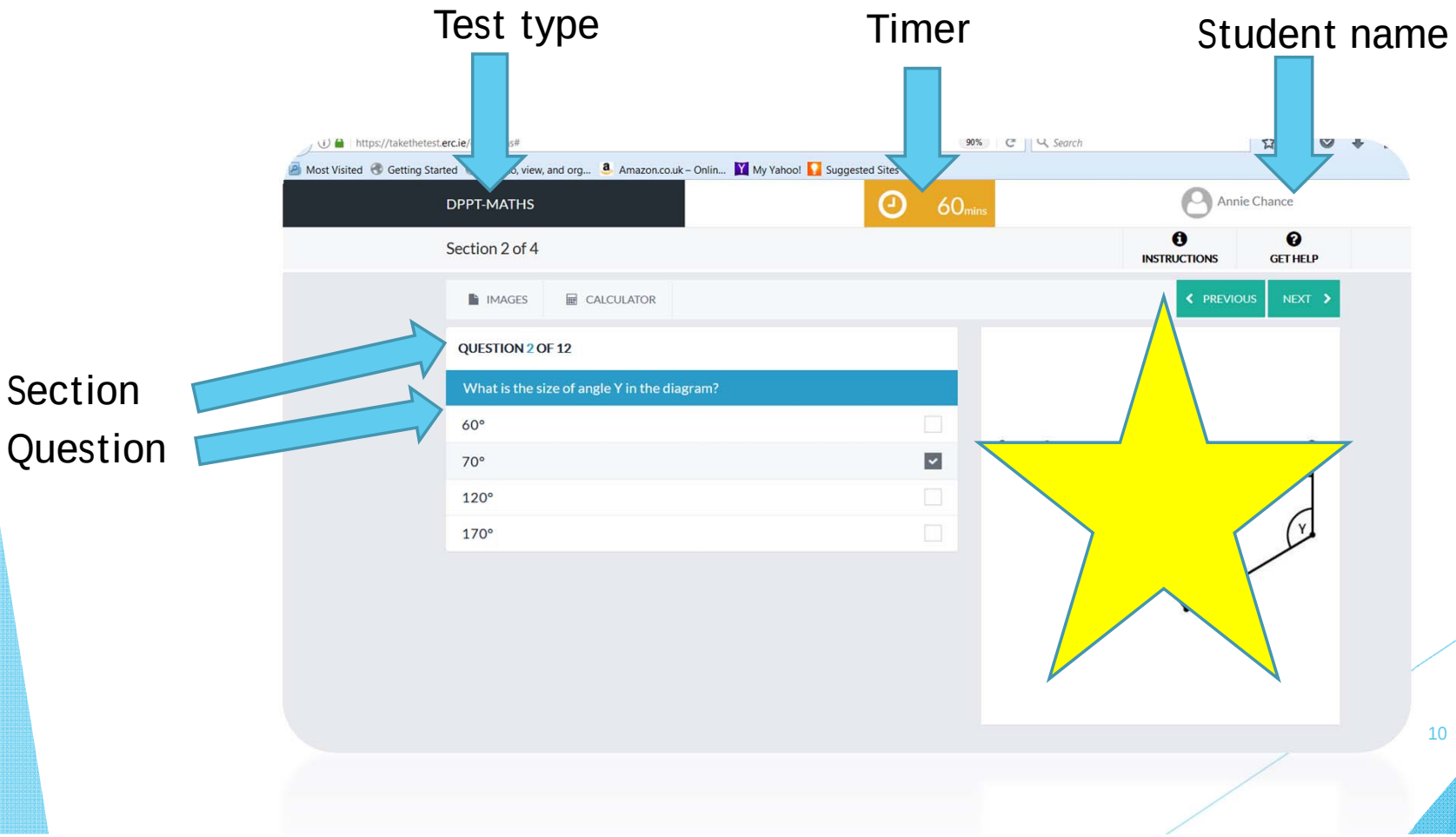
Common DOTS on-screen elements



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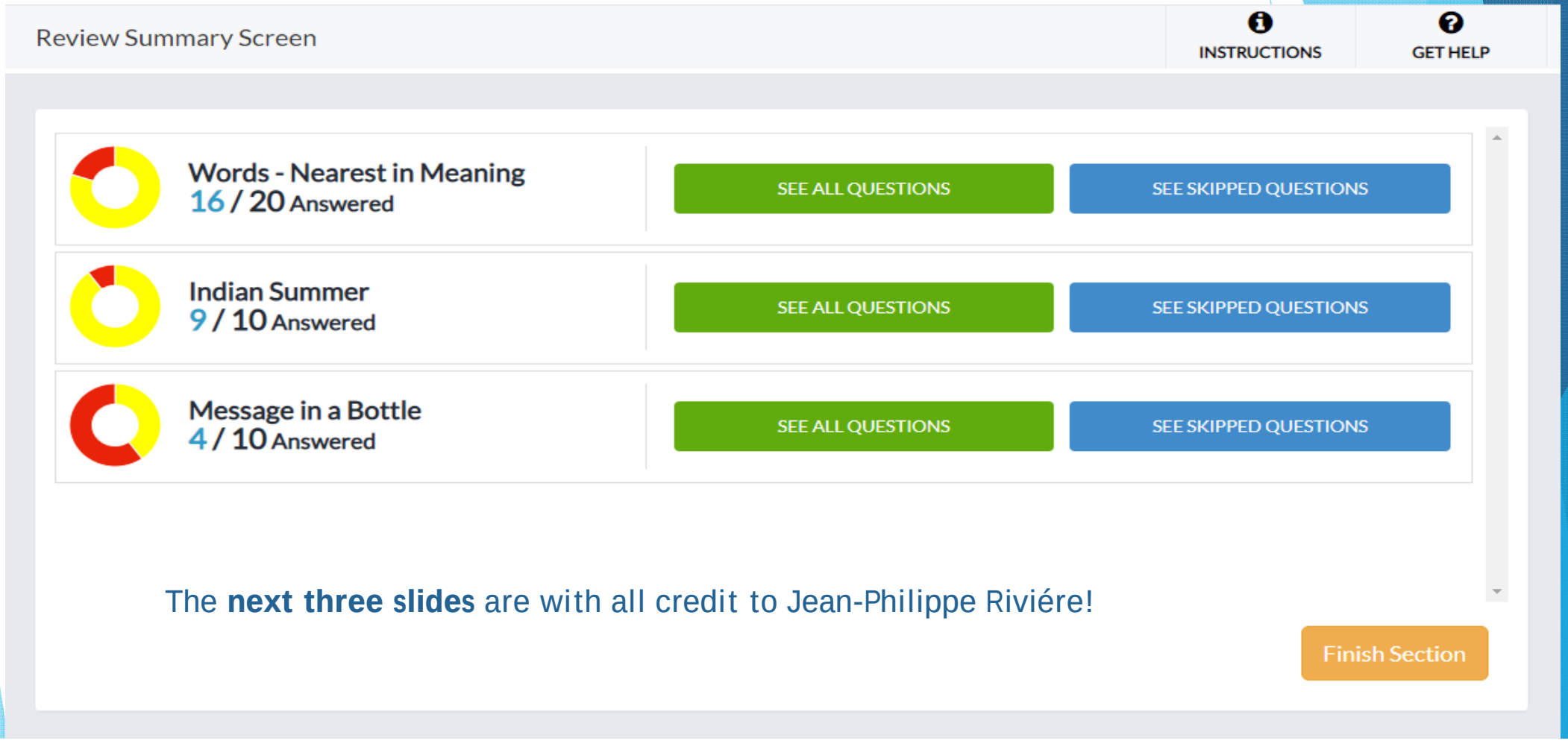
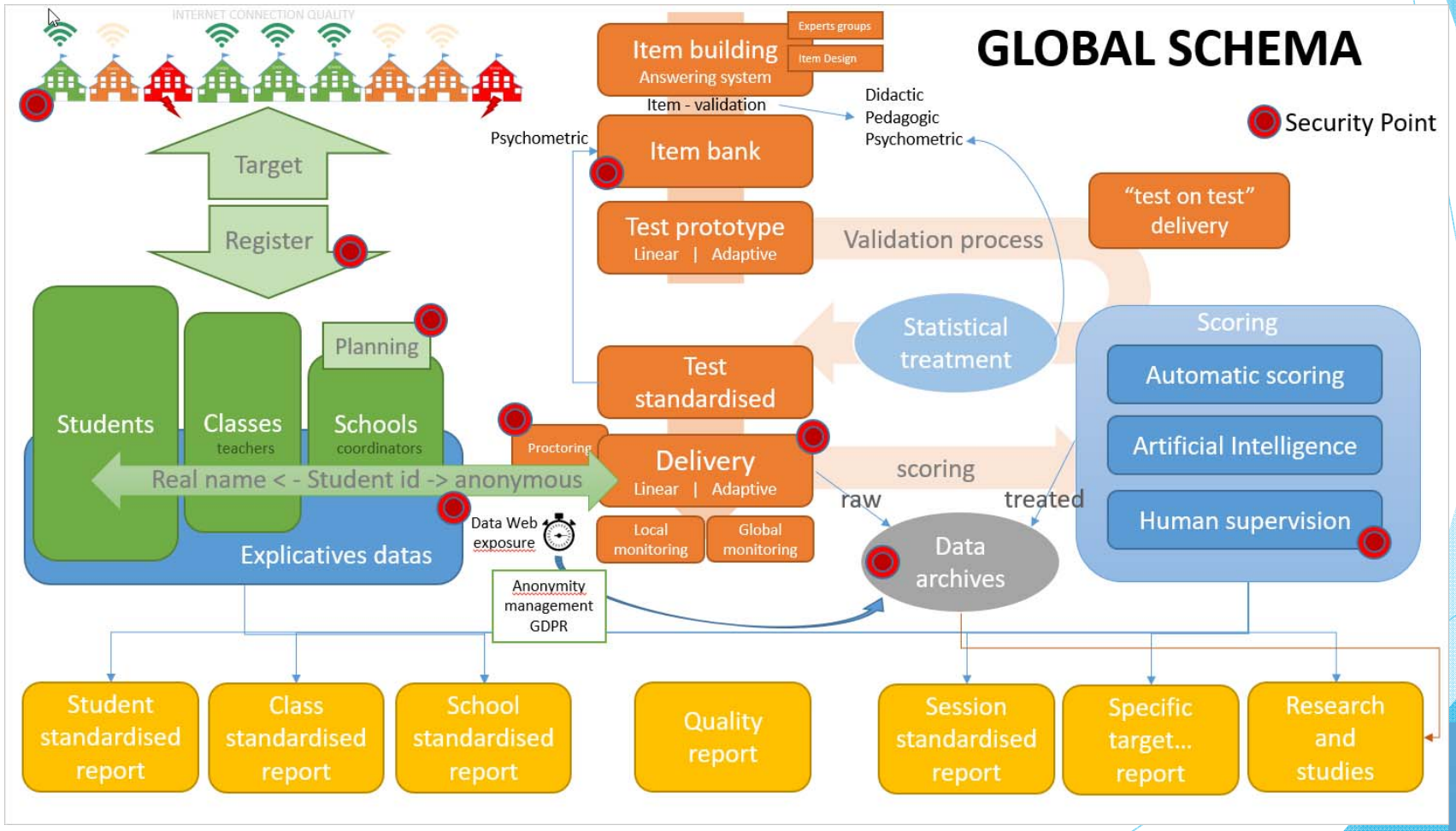
Example DOTS review screen



The **next three slides** are with all credit to Jean-Philippe Riviére!

Ideal (full integrated) online assessment



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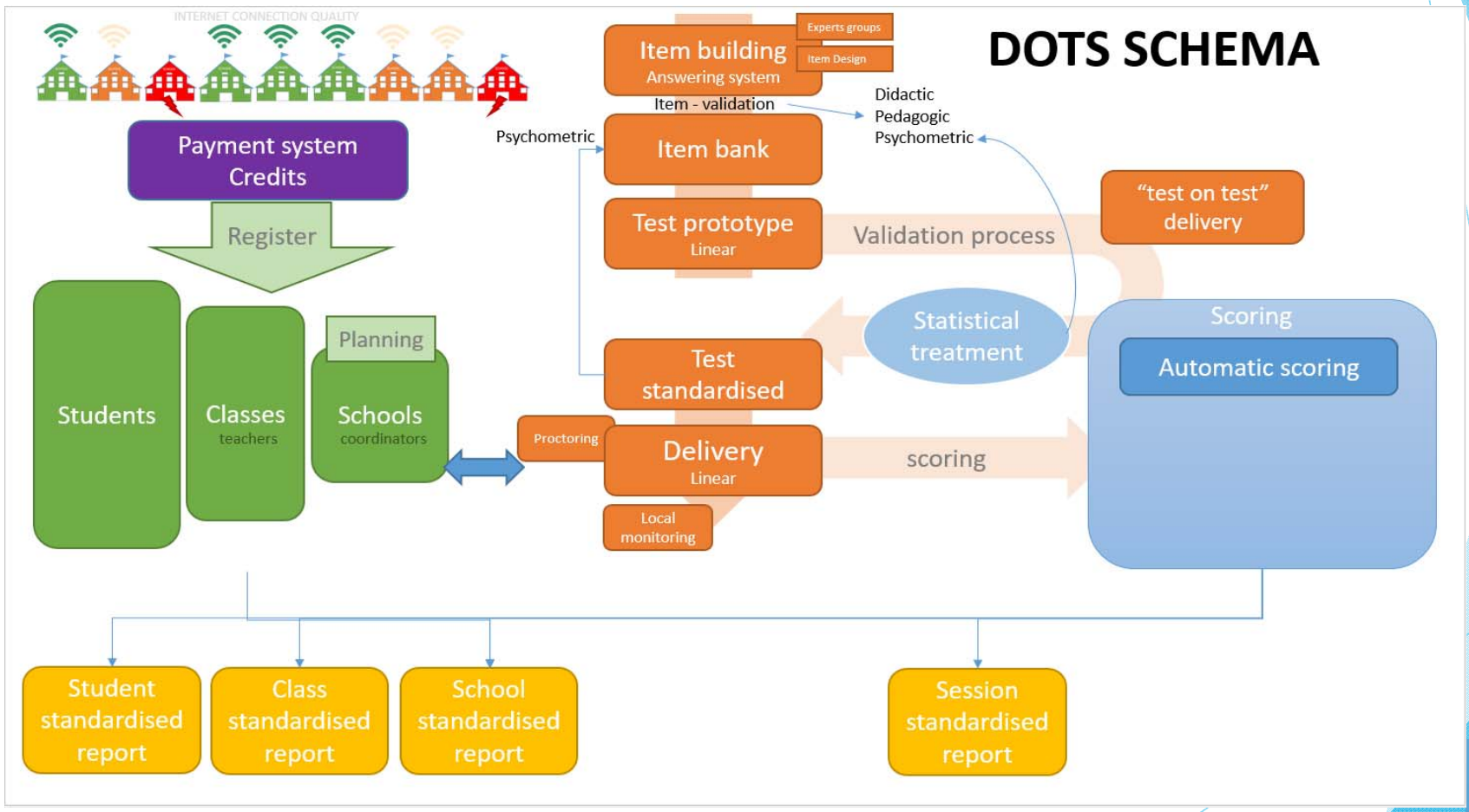
DOTS



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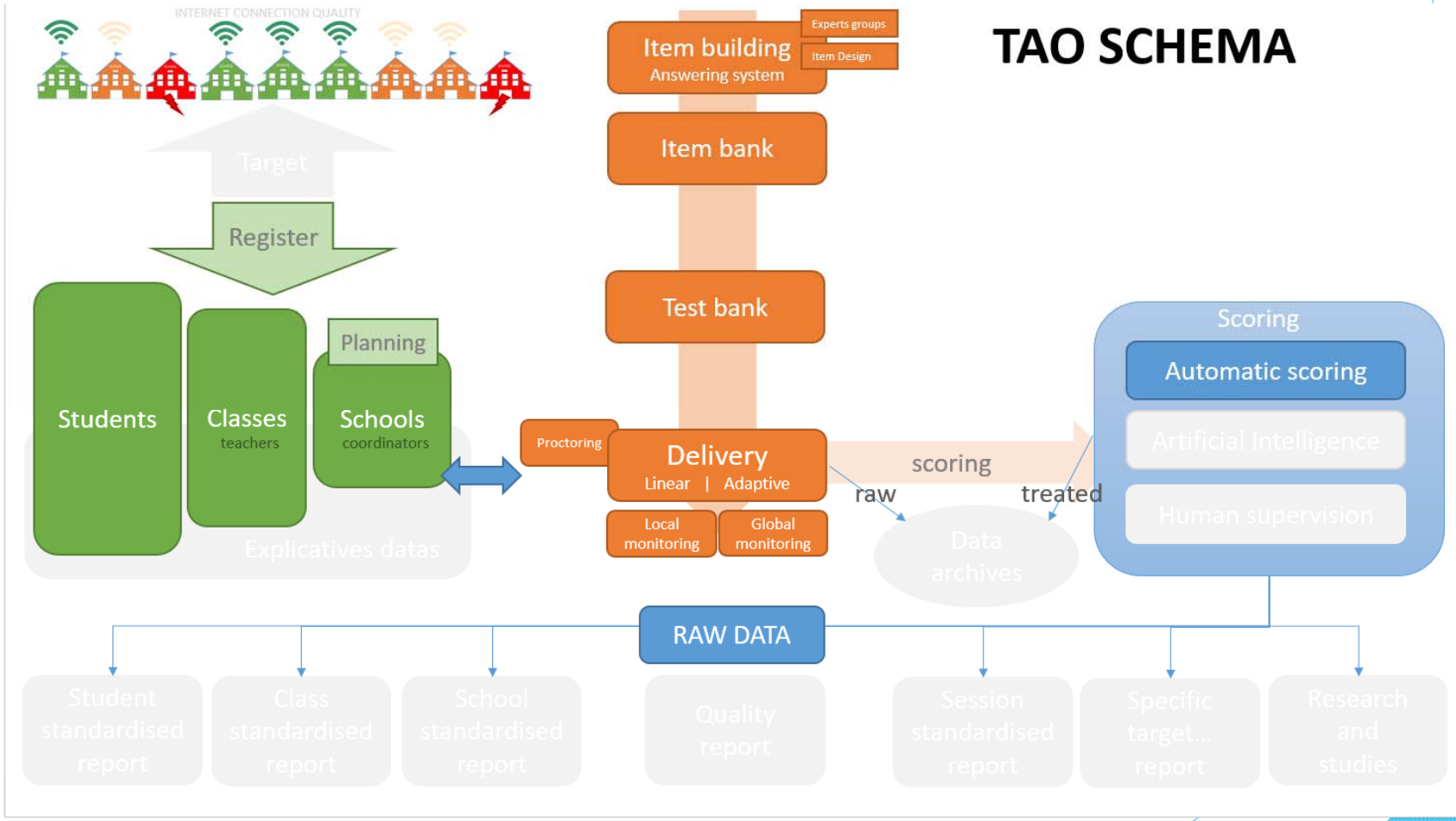
TAO



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Moving from DOTS to TAO

- DOTS is based on a commercial model – timely to consider move to alternative non-commercial solution
- Working with Jean-Philippe Riviére, we have established that:
  - DOTS has several strengths, in particular
    - it is a fully integrated solution
    - the test-taker interface is good
  - However, there are difficulties associated with DOTS and a commercial model more generally…

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Moving from DOTS to TAO

- Vulnerabilities – fluctuations in test sales and policy u-turns or sudden changes
  - already experienced
- Single instance of DOTS – lack of possibility to develop and test in tandem
- JavaScript library results in rigid structure – not add-on friendly – and there are some issues with back-office user interface
- No facility for fast and tailored communications with schools
- No straightforward way to extend item types, e.g. text response and text response coding extension
- Lack of access to code – sub-optimal management
- Also: many advantages of open source solution, not least the existence of an international TAO community

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Potential solutions

- Again, working with Jean-Philippe Riviére, we have established that:
- TAO out of the box provides about 80% of the solution
- Involves building or finding solutions that are **focused on decoupling of structure and content, e.g. via TAO extensions** for:
  - Migration of test content (solution already identified via CSS)
  - School portal (DEPP?)
  - Payment system (is Ireland unusual in this?)
  - Reporting function (DEPP?)
  - (and ideally) Text response coding function (INVALSI?)

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Questions for FLIP participants

- Have other countries had experience of moving from a commercial to TAO or other open source online assessment platform? What are the key learning points?
- Do any other countries ask schools for payment for tests?
- Do any other countries have or need TAO-friendly solutions for the following:
  - School portal
  - Payment system
  - Reporting function
  - Text response coding function

Thank you

- Jean-Philippe Riviére
- Thierry Rocher
- DOTS team – Adrian O'Flaherty, Aidan Clerkin, Theresa Walsh, Eemer Eivers (up to August 2018)
- Test development team – Gerry Shiel, Emer Delaney, Rachel Cunningham, Emma Ní Churraíon, Brenda Donohue

- Contact

  - jude.cosgrove@erc.ie
  - DOTS@erc.ie
  - www.erc.ie
  - trythetests.erc.ie

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