

Engaging children in learning:
what do teachers need to know, believe and do?

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Engagement

The learning environment
Knowing – believing - doing

Opportunity

Knowledge and beliefs

pedagogy

Child-led

Child-centred

Trust

Co-agency

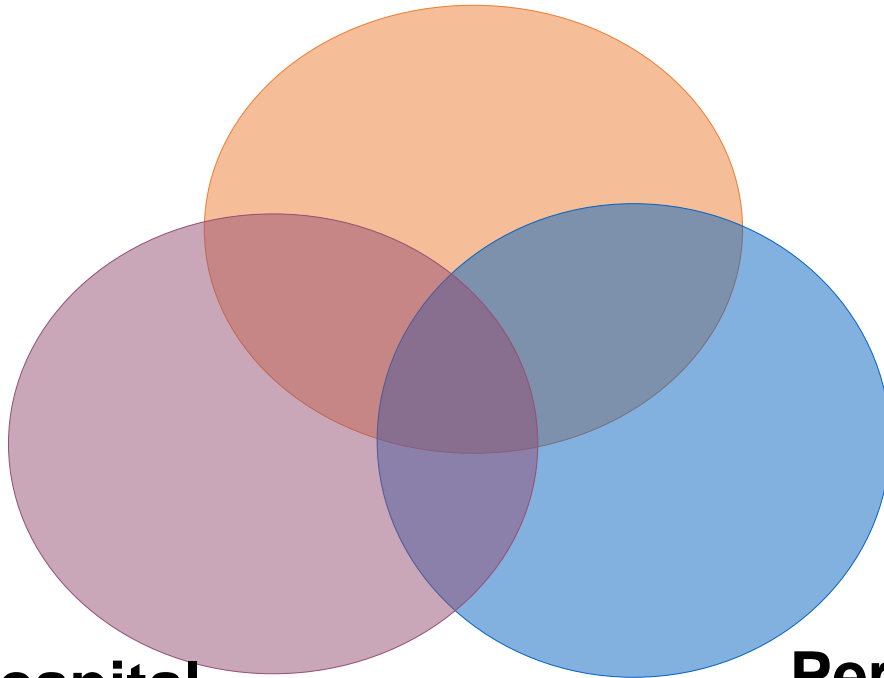
Relationship

2018..... 1978

forty years since Warnock

- Pupils with learning difficulties (PWLD) report

Cognitive knowledge/skills



Cultural/social capital

Personal Identity

Two main frameworks

Additional Support for Learning Act 2004 – amended 2009

- Supporting children's learning: Statutory Guidance on the Education (Additional Support for Learning) Scotland Act 2004 (as amended) (2017)

<https://beta.gov.scot/publications/supporting-childrens-learning-statutory-guidance-education-additional-support-learning-scotland/>

- ASfL framework explicitly linked to GIRFEC

Getting it Right for Every Child (GIRFEC)

- For Scotland's Children 2001 - Better Integrated Children's Services
- has been continually developed since then and GIRFEC is the overarching concept relevant to ALL agencies
- GIRFEC is a national policy
- Children and Young People Act 2014

<http://www.scotland.gov.uk/Topics/People/Young-People/gettingitright>

Factors which give rise to a need for support

- Disability or health need
- Family circumstances
- Social and emotional factors
- Learning environment

Supporting Children's Learning: Statutory Guidance on the Education (Additional Support for Learning) Scotland Act 2004 (as amended) Code of Practice (Third Edition) 2017

The learning environment

For example, highly able pupils may not be challenged sufficiently or those with specific reading or writing problems may not be receiving the appropriate support to help them make progress overcoming their difficulties. Para. 18. p.23

Disability or health need

may mean that additional support is required, for example, where a child or young person is a disabled child. Additional support is required to meet the needs of a child or young person who has a motor or sensory impairment, specific language difficulty, fetal alcohol spectrum disorder, autism spectrum disorder or has learning difficulties. Para. 21. p.23

An interactionist perspective

Learning environment

School ethos
Teacher attitudes
Curriculum
Social context
Prior experience
Appropriateness of materials.....

Disability or health

Sensory or motor impairment
Cognitive impairment
Mental health
Eating disorders...

Child

Family circumstances

Parental alcohol or drug misuse
Young carer
Family member imprisonment
Looked after by local authority
....

Social and emotional

Pro-social, anti-social behavior, bullying
attachment issues
adverse childhood experiences...

Information on barriers to learning and participation can be collected from two perspectives

Learner focus

Circumstances
personal to the learner
Social and cultural
aspects

Nature of learning
difficulties

INTERACTION

Context focus

Appropriate curriculum,
methodologies,
assessment, ethos,
planning, support,
behaviour policy,
marking policy,
homework policy, etc.,
etc.

The Learning Environment

What are the conditions that might support the engagement of all learners?

What individual teachers know, do and believe matters.



National Framework for Inclusion

Values and beliefs:
Professional values
and personal
commitment

Professional
knowledge and
understanding

Professional skills
and abilities

$$2 \frac{1}{2} \div \frac{1}{4}$$

You have two and a half pizzas.

Everybody gets a quarter of a pizza.

How many people get a quarter of a pizza?

$$2 \frac{1}{4} \div \frac{3}{8}$$

Children make connections.

Teachers need to know how to structure teaching in ways that support children making productive connections.

Pedagogical content knowledge

- Knowledge of subject
- Knowledge of pedagogy, structuring and organising learning
- Knowledge of children's thinking, conceptual understanding and development in specific domains

Shulman, L.S. (1986). Those Who Understand: Knowledge Growth in Teaching, *Educational Researcher*, 15, (2), 4-14.

'Meeting children's learning needs'

<http://www.journeytoexcellence.org.uk>

**'A school is good to the extent that...
teachers have a good understanding of children's
learning and development.**

**A school is excellent to the extent that ...teachers have
a deep understanding of children's learning and
development....'**



Scottish Attainment Challenge
Cognitively Guided Instruction Project:
2016 – 2018



A report on supporting teachers' understanding of
children's mathematical thinking

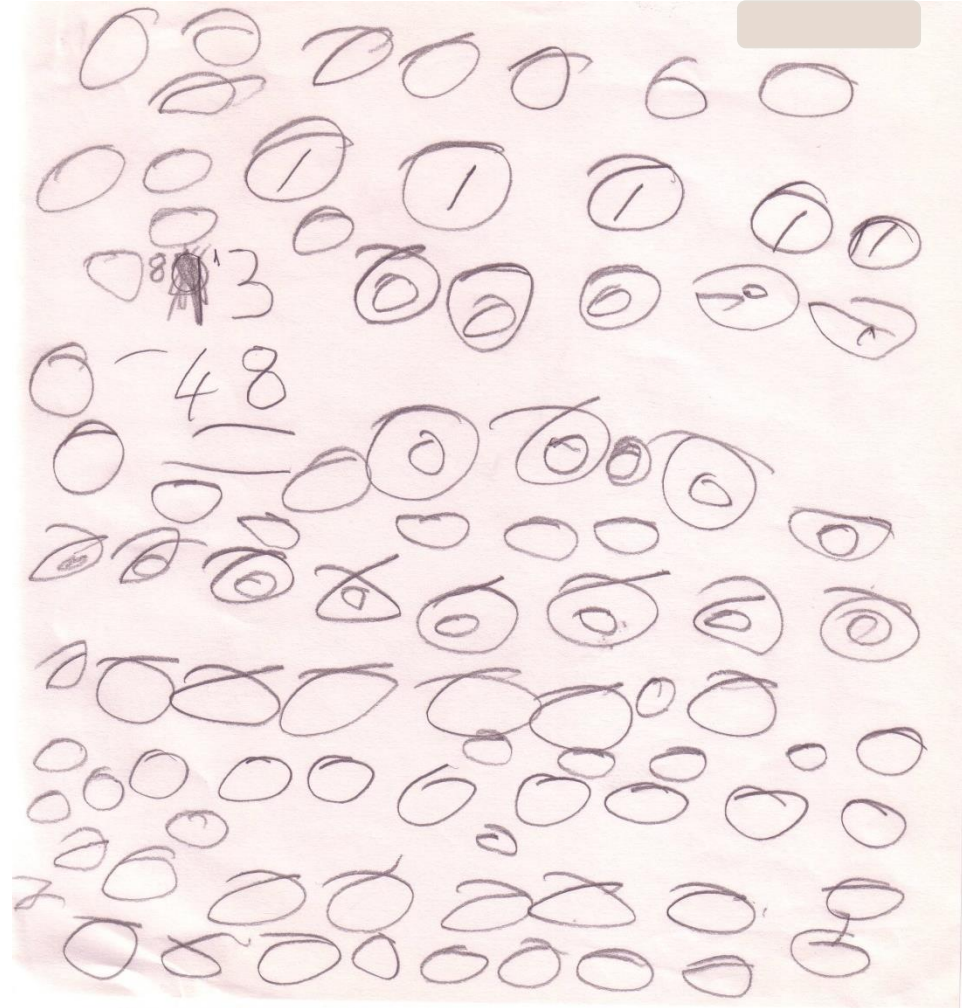
Dr Lio Moscardini

Sue Sadler

August 2018



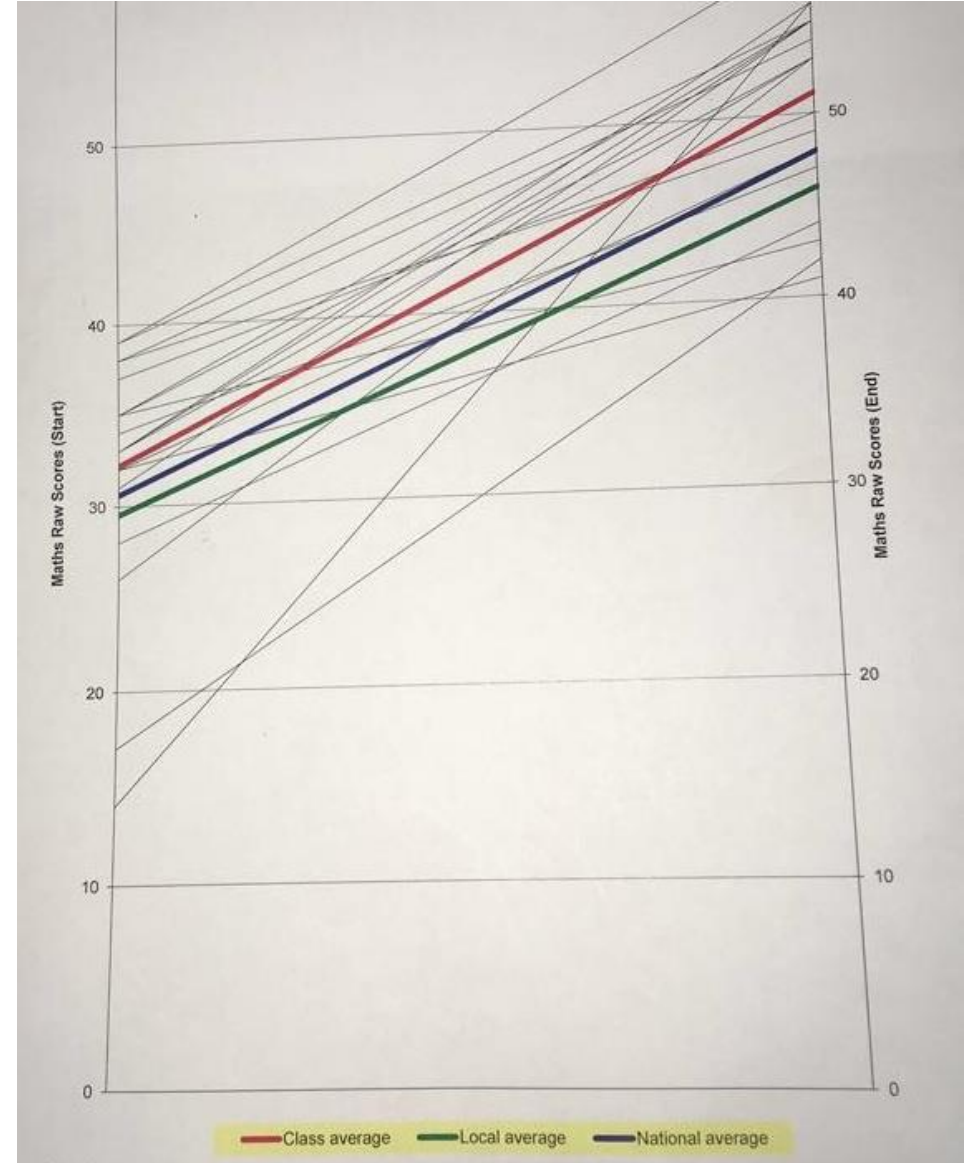
Veruca Salt comes from a very rich family. She has 93 dolls! 48 of her dolls have blonde hair. How many do not?



Attainment

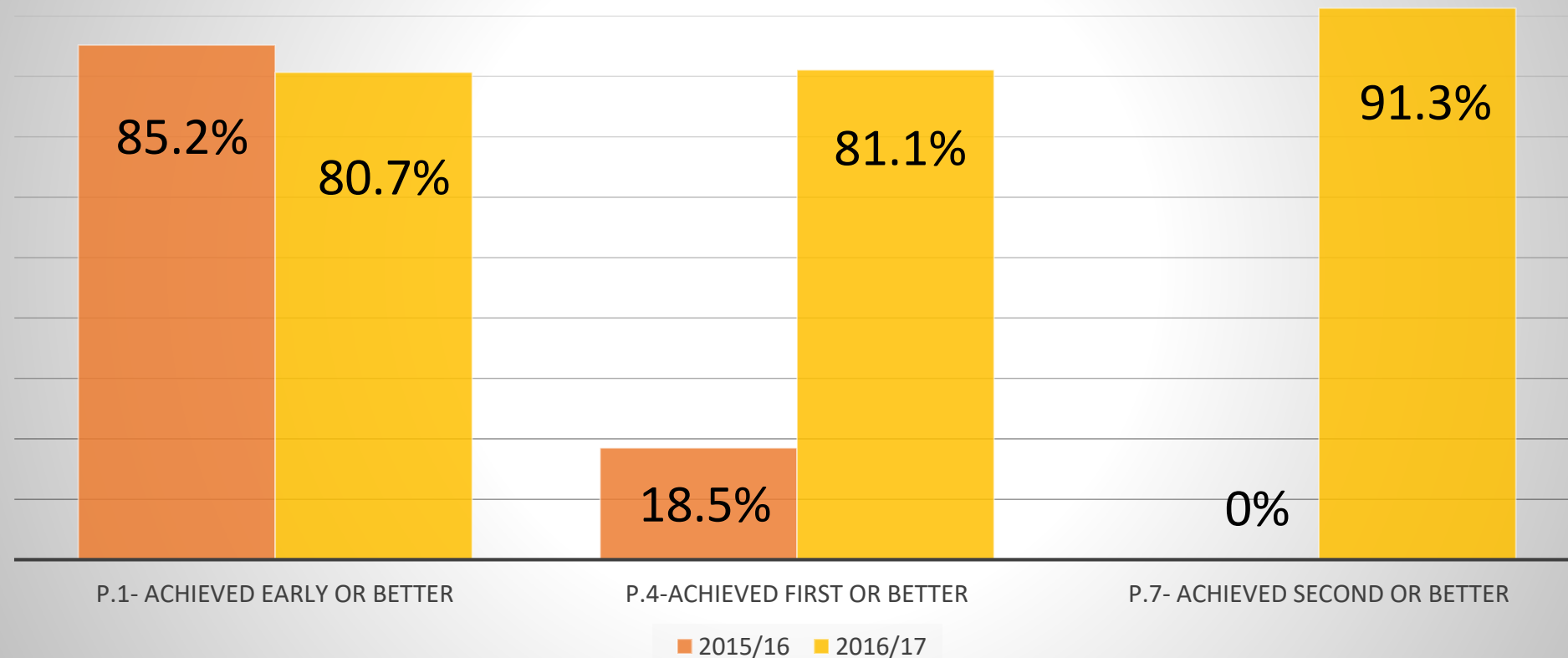
SNSA

- P.1 100% High/Medium
- P.4 90% High/Medium
- P.7 96 % High/Medium



Primary School Year 1 Progress

p.1/4/7 achievement of levels in numeracy



Inclusion

Inclusive practice did not feature as an explicit element of the professional development activity with teachers.

- Developing content knowledge and supporting application helps to support **ALL** learners.
- CGI is not a remedial approach to numeracy, it is a model which takes account of pedagogy and the learning environment.
- No pupil on a separate *numeracy intervention* across 3 schools.
- 2/3 schools have an ASN provision within the school. Real-life connections/Manipulatives particularly help these pupils to engage with the 'maths'.
- Flexible groupings are working well across all 3 schools in the majority of classes.

Children's Engagement

- Children's attitudes to maths have significantly improved across 3 schools.
- Teacher attitudes to maths and children's thinking have had a huge impact on children's engagement.
- Mathematical discussions have improved greatly, pupils are confident and able to talk about their thinking to a much greater extent than before.
- Learning from each other – can fit alongside Number Talks easily.
- Intrinsic motivation is evident – creating an environment of positivity/discussion drives this motivation.

When teachers create a learning environment that genuinely engages children in learning with understanding everybody benefits.

" I like it instead of maths"

" It helps you learn"

" I like this maths because you can count"

" It helps you to count"

" It's easy 'cos I did a bus and I put windows in"

" I like it 'cause I learn more"



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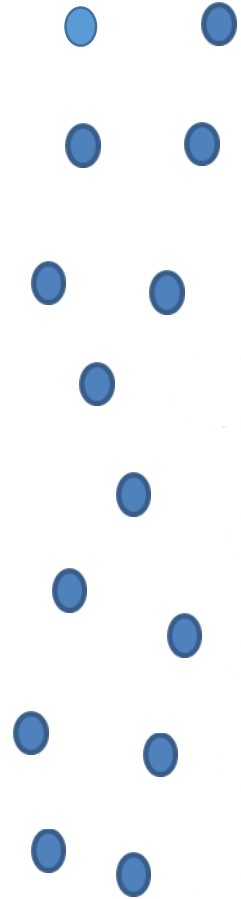
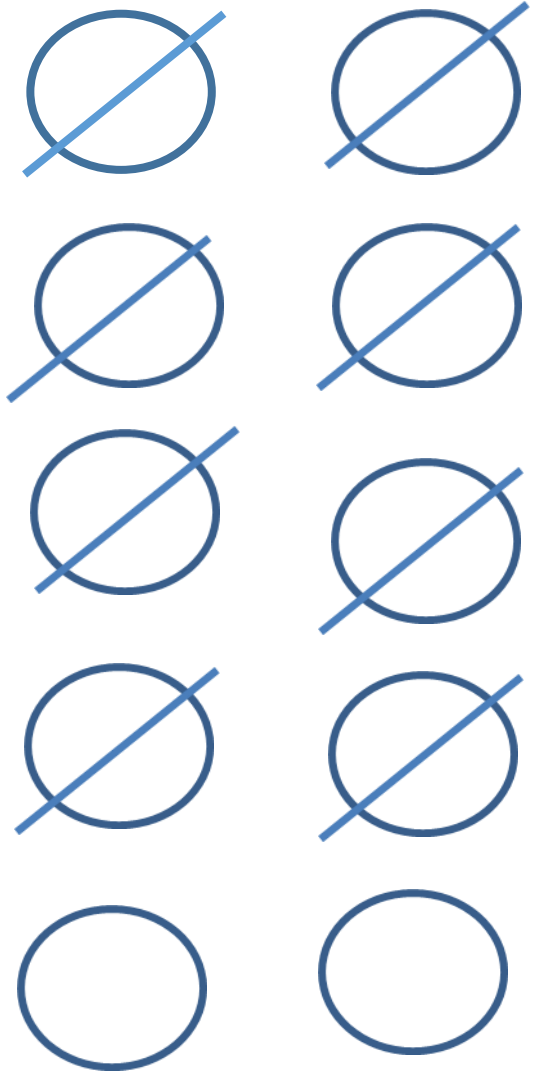
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Relationship

Mr Flanagan has 84 biscuits and decides to put them into bags of seven to give to children in his class. How many bags will he need?



It's twelve.
You will need
twelve bags.