

# Using research evidence to experiment with curriculum design

## Welcome back!

Philippa Cordingley Centre for the  
Use of Research and Evidence in  
Education

# Teachers as curriculum designers – here and in other countries

- Systematic reviews of CPD that makes a difference for teachers as well as pupils
- 4 UK reviews, 1 from New Zealand – remarkably similar results – for another day
- But intriguingly, in other countries, a key vehicle for deepening & extending teacher knowledge and skills in ways that benefit young people –
- ...is developing and designing rich curriculum experiences

# Curriculum design and communities

- For positive outcomes for pupils development needs to be collaborative
- For transferring learning between environments we need, among other things:
  - Co and specialist coaching wrapped around real work
  - Diagnosis of starting points & vision of how learning will be different with success
  - Deep subject knowledge to enable flexibility & connection making

# CPD and curriculum design case study

- Review of reviews no 1 illustrates making curriculum development a vehicle for powerful professional learning via:
  - Aligning CPD, curriculum development and PM motivated teachers
  - Facilitating inter-school curriculum groups helpful when there is limited capacity
  - Mobilising teachers to develop frameworks & resources, with specialist support, builds confidence and subject knowledge

# Some clear, core research findings to build on

- A review of relevant reviews of research helps
- The map identified 6 key trends re designing:
  - context based learning experiences
  - connections between learning at school & at home
  - collaborative learning experiences
  - ways of building on pupils' starting points
  - remove rigidity to allow time for conceptual development
  - excellence and professional development in subject knowledge

# The second review

- Several thousand studies covered by the reviews in the map
- 233 covered by the reviews that focussed in depth on 6 findings from the map
- These were then filtered (twice) for evidence re: student impact, relevance to the six themes and/or the themes underpinning the new secondary. Seven were simply unavailable.
- Resulting in 63 remaining studies in this review

# The second review

- Provides rich detail on the 6 key trends and several claims made by QCA for the secondary curriculum
- Establishes the maturity of the evidence base in relation to collaboration, context based learning, home/school links and building on students' existing understanding
- Highlights effectiveness, in particular, in the context of science, maths, MFL and independent learning
- Identifies the potential of curriculum flexibility and cross-curricular learning - & clarifies where more research would help

# The Second review – context based learning examples

- Mechanisms for making connections in science:
  - Drama and role play
  - Situating learning in everyday challenges e.g. Diet and health, traffic and safety, energy at home
  - Simulation of science in context via ICT
- Mechanisms in other subject areas
  - community service based learning, real world eg school problems, students contributing their own information and contexts from home

# Connecting learning in school and in the home

- Curriculum experiences connected with the community & pupils' home lives are effective
- Examples include asking pupils to research games played in different homes/cultures, technologies used in local jobs/ industries by their relatives
- Homework that sparks conversations between children & parents is even more important – eg shoe boxes, disposable cameras

# Collaboration

- When the curriculum is designed through structured group work learning benefits
- It involves teaching and modelling via:
  - Designing interdependent, open ended tasks
  - Prompting exchanges of ideas & resources
  - Providing protocols for building on each others' points
  - Insisting on explicit reasoning
  - High expectations re ownership of group processes and decisions
  - Eg Philosophy for Children, Thinking skills Mystery games

# Building on starting points

- The need to create opportunities to identify and build on pupils' existing conceptual understandings – and misunderstandings
- Eg asking pupils to draw their sense of how humans sense things – eg how they smell a flower and setting up a series of experiments to explore these “understandings”
- Linking creativity & maths by researching how it evolved, using story telling to inspire pupils and asking them to investigate the mistakes

# Excellence in CPD & Specialist knowledge

- Cross curriculum design is great for developing specialist subject knowledge – and depends on it
- So it also calls for excellent support for professional learning – wrapped around real tasks eg developing learning materials, and project plans and ways of assessing progress within them

# Flexibility to enable conceptual connections

- Flexibility in curriculum planning:
- increases teachers' ability to respond to the world of their pupils as it changes
- Enables greater variation in pace giving time to pursue topics in depth
- Helps pupils make connections between ideas and so deepen their thinking

# Putting all this to work – in the real world

- A key thing to notice is the need to combine things  
Some of you will be using tasters
- Today we are trying out “Cogs”
- Similar tools to tasters to support curriculum design and development
- You are helping us design design tools!

# A cog

- A nugget of evidence
- Tools for immersing yourself in how your pupils experience this phenomenon
- Several layers to help you combine findings in designing coherent learning experiences
- Reflective questions
- Tools for exploring next steps/new approaches based on the nugget and pupil feedback
- Links to the underpinning research

# Choosing an area to work on

- On your tables there are 10 sets of cogs
- In pairs read 2 of them. Decide together the 3 key points to convey
- Share these key points with another pair
- Describe the themes covered by your cogs to the rest of the table
- Now, from all the cogs described choose two Cogs to test/explore with in a pair or triad

# Testing out the cogs

- Consider the activities and identify either a context when you might explore this – or where you'd encourage a colleague to do so
- What would encourage you/them to do it?
- What would get in the way?
- How might you need to adapt it?
- How would it contribute to your pupils' learning, your PM targets or the SDP
- Put your thoughts on a flip chart page

# Feedback & next steps

- How likely are you or a colleague to use the Cogs back in school?
  - score the laminated cogs for likely use 1-4 with 1 being unlikely and 4 very likely
- Write any suggestions, questions or adaptations on the laminated COGS
- Share out the A4 versions – we'll email the electronic versions to you
- What does thinking about the Cogs tell you about yourself as a curriculum designer?

# Designing curriculum experiences for speaking and listening

- Aimed to improve the overall standard of speaking and listening
- Targeted improving listening skills, abilities to converse and to comment on and extend other children's ideas.
- Improved quality & quantity of speaking and listening in groups. Growing confidence in their own abilities and expectations via:
  - A list of 'I can' statements was generated, displayed as a poster and used to create a set of class ground rules for speaking and listening for learning
  - Planned progressively demanding lessons eg from "what makes a good friend?"
  - "What shows we are about to lose our temper and what this means"
  - "Identifying ways of staying calm"
  - "identifying a whole class picture of a week of positive learning relationships"
    - and a whole class golden time reward
  - Close observation and a skills checklist was used to learn through and monitor progress

<http://www.standards.dcsf.gov.uk/ntrp/lib/pdf/bilsbroughhawesdixon.pdf>

# Yoursself as a curriculum designer

- Write down 4-5 “I can” statements about yourself as a curriculum designer
- Choose 1-2 to share on your table
- Choose two as a table to feedback in plenary

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