

BSRLM Early Years and Primary Mathematics (EYPM) Working Group

Minutes of the 7th Meeting

Venue: Queen's University, Belfast

Date: 9th November 2019

Time: 3pm

Convenors: Sue Gifford, Rachel Marks, Gwen Ineson

Scribe: Gwen Ineson

In attendance:

Sue Gifford (Roehampton University); Rachel Marks (University of Brighton); Gwen Ineson (Brunel University); Therese Dooley (Dublin City University); Diane Owens (Council for the Curriculum, Examinations and Assessment, NI); Shauna McGill (Ulster University); Chengkang Zhang (University of Bristol) Ana Medrano Moya (Centre for Research and Advanced Studies of the National Polytechnic Institute, Mexico); Ulises Xolocotzin (Centre for Research and Advanced Studies of the National Polytechnic Institute, Mexico)

Delegates attending this meeting represented England, the Republic of Ireland, Northern Ireland and Mexico. Our intention was to explore and compare the mathematics curriculum in England, Northern Ireland and the Republic of Ireland, building on the fascinating insight we were provided with during the plenary lecture.

Therese Dooley on the mathematics curriculum in the Republic of Ireland:

- New primary maths curriculum to be published in Autumn 2021 – aim is for 'Mathematical Proficiency'
- Guiding principles are that:
 - mathematics is viewed as useful and as a way of thinking, seeing and organising the world, as well as being aesthetic and worthy of pursuit in its own right
 - all children are viewed as having the capacity to engage with deep and challenging mathematical ideas and processes from birth
 - a multicultural curriculum valuing the many ways in which children make sense of mathematics
- progression from 4 – 12 years old
- these consist of learning paths, which are seen to be non-linear and non-age-related
- Therese has published a report addendum:
https://www.ncca.ie/media/4087/primary_maths_research_addendum_2019.pdf

Shauna McGill on the mathematics curriculum in Northern Ireland:

- 'Mathematics and numeracy' is one 'area of learning' in the NI curriculum (others are: the arts, language and literacy, personal development and mutual understanding, physical education, the world around us and religious education)
- Skills-based
- Teachers talk about the 'Golden book' (The Northern Ireland Curriculum Primary)
- Teachers have autonomy about how they structure mathematical learning (although this is affected by a recent change that teachers are now 'allowed' to prepare children for 11+ tests)

- An aside: Ulster University had 438 applications for 33 primary ITE places!

Gwen Ineson on the mathematics curriculum in England:

- Focused input on early years draft revised curriculum
 - 'count confidently beyond 20' – EY experts suggest up to 10 should be the 'goal'
 - 'Automatically recall (without reference to rhymes, counting or other aides) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts' – no evidence that memorisation is appropriate at this age
 - Previous early learning goal about shape, space and measures has been removed
 - Please note that the consultation about this is still open (until 31st January 2020): <https://consult.education.gov.uk/early-years-quality-outcomes/early-years-foundation-stage-reforms/>
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Following input on these three approaches to EY/P mathematics curricular, we had an interesting discussion about how we might visualise the mathematics learning journeys that children travel. Ideas included a flower growing outwards, a climbing wall with different possible routes, a coil where ideas are revisited, and a slinky!

Rachel Marks on the EEF EY/KS1 project:

- Rachel is working with Colin Foster, Jeremy Hodgen, Nancy Barclay, Camilla Gilmore and Vic Simms on an EEF funded project: 'Review of evidence on early years and KS1 maths teaching'
- The intention is to provide evidence to an expert panel to support production of a guidance report
- Currently coding literature dataset (approx. 160 experimental studies, 40 reviews and 100 meta-analyses)
- Further updates will be provided at the next EYPM group at the Cambridge conference in March

Sue Gifford on an ITE geometry survey:

- Sue surveyed a range of primary PGCE providers about the amount of time they dedicate to geometry on their programmes. These ranged from half an hour to 4 hours, with the most typical response being 2 hours out of a typical overall input to maths of roughly 25 hours.
- This is a concerning trend, particularly with the loss of an early learning goal on 'shape, space and measures'
- We also talked about the time student teachers spend in university and in schools during their initial teacher education. In England (on a one year programme) they have to spend 24 weeks in school, and would typically have 12 weeks in university. In NI student teachers have 19 weeks of university input and 19 weeks based in school. In the RoI their ITE takes place over 2 years and they would typically have 48 hours of maths over the two years.