University of BRISTOL

Graduate School of Education

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Everyday Maths: Empowering parents to 'find the maths' in everyday family activity

Key findings and implications for Policy Makers

The Everyday Maths Project ran workshops with parents of primary school children, to develop a parent-centred approach to supporting mathematics learning. These workshops aimed to help parents recognise and discuss the kinds of mathematics that occurred in everyday activity. The workshops started with parents' experiences of everyday family activity, and sought to make explicit the kinds of mathematics used in that activity. Through the workshops, parents became more confident in prompting, recognising and referring to mathematical ideas in conversation with their children

As we worked through the process with parents, the following principles were highlighted as key to the workshops' success:

- Workshops position parents as experts – parents know about their family activity.
- Everyday Maths is about exploring the world and asking open, exploratory questions, not about knowing the answers.
- Everyday activity and embodied experience is core to Everyday Maths, rather than abstract concepts.
- Everyday Maths starts with activity – curriculum (or school) maths starts with a concept.
- The boundaries of mathematics are not important, but conversation is.

It was important for parents not to start out with an agenda of which topics they wanted to discuss with their children, but to encourage children to explore the world around them and ask questions. This is not a curriculum-focused approach, but can act as a complement to the mathematics that children are doing in school.

EVERYDAY MATHS

The research

The Everyday Maths project (funded by the Nuffield Foundation) explored and supported parental involvement in children's mathematics learning, taking a parent-centred approach. Traditional models of parental involvement usually start with what the child is learning at school. Instead, our approach positions parents as experts by starting with family activity.

Most parents want their children to do well in mathematics, but may be unsure about how to support this. Parents may not feel confident about their own mathematical expertise, or about their familiarity with the methods used in the current curriculum, or about their ability to act as a "teacher" to their child. These issues can cause tension when parents try to support their children's mathematics learning: The Everyday Maths project supported parents to think about supporting learning in a different way.

The project helped parents to recognise and discuss with their children the maths that is present in everyday activity, such as food preparation and sharing, and household budgeting.

Research design

In the Everyday Maths project, we worked with parents in four diverse Bristol Primary schools, running 3-4 workshops in each school. The workshops aimed to help parents recognise and discuss the kinds of maths that occurs in everyday activity. Workshop 1 focused on discussing everyday family activities; Workshop 2 on "finding the maths" in family activity; and Workshop 3 on mathematical conversations that parents could have with their children during/about the activity. In our research, Workshop 4 enabled parents to discuss what they thought of our approach.

Initially, parents felt they 'had to end up at a right answer', and worried about activity fitting into a 'curriculum pigeonhole' (defining something as mathematics, as opposed to science, geography, economics and so on.) This meant that they avoided starting conversation around maths. The workshops supported parents to work through these anxieties

Further information

We have developed some free online resources (funded by the ESRC) to help schools and other organisations work with parents of primary school children in similar ways. These were launched in November 2015, and include videos which introduce the ideas behind the Everyday Maths project, and toolkit booklets for schools who may want to run the workshops, and for parents who participate in the workshops. Following the launch of the resources, the toolkits are now being used in a number of schools around the country. These free resources, and further details about the project including examples of discussions that arose during the workshops can be found on our website,www.everydaymaths.org.

We have shared our ideas, and more recently the resources, at a range of academic and practitioner conferences and events. Complete papers in conference proceedings include:

Jay, T., Rose, J., and Simmons, B. (2013). "Why parents can't get what they (think they) want", Proceedings of the British Society for Research in Learning Mathematics, November 2013.

Rose, J., Jay, T., and Simmons, B. (2014). "It's helping your child experience the world: How parents can use everyday activities to engage their children in mathematical learning", Proceedings of the British Society for Research in Learning Mathematics, June 2014.

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