

## **Working group report: building and sustaining active research collaborations with teachers of mathematics**

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This BSRLM working group met for the first time to explore collaborations between teacher and researchers in the processes of doing, reflecting upon and engaging with the findings, of mathematics education research. This theme is considered within the current English educational context where Teaching Schools and DfE-funded Maths Hubs are being encouraged to participate in ‘research-informed’ practice. In addition, the International Commission on Mathematics Instruction (ICMI) has identified the theme, ‘mathematics teachers working and learning in collaboration’ as one of five international survey topics that will present findings during ICME13 in July 2016 (Robutti et al. for publication 2016). This suggests that there is wide interest in brokering collaborative ways of working involving researchers and teachers to improve learners’ mathematical outcomes around the world.

**Keywords: collaborative research; teacher inquiry; research-informed practices**

### **Introduction**

We structured the working group session around the following activities:

- Personal introductions that focused on current professional interests concerning the theme of the working group and suggestions for how the group might achieve some worthwhile outcomes.
- Discussion of the term ‘active research collaboration’ in relation to the personal experiences of group members.
- Considerations of different devising strategies for engaging teachers with the processes and outcomes of relevant research in clear, accessible and engaging ways – for particular use when establishing or seeking to promote research collaborations with teachers.

### **Key related interests for the working group members**

Amongst the thirteen working group participants the range of professional roles and contexts included:

- Researchers leading large funded research projects involving teachers.
- Teacher educators/researchers supporting teacher networks (Maths Hubs, School-Centred Initial Teacher Training programmes, informal groups).
- Teacher educators/researchers looking to work more closely with groups/networks of teachers.
- Doctoral researchers interested in working collaboratively with teachers in other countries.
- Advisers supporting teacher-research groups.

The group has a broad range of experience and expertise in relation to working in active research collaborations with teachers of mathematics and it was quickly apparent that this working group was a welcome opportunity to share practices, discuss issues and challenges and work towards some collective outcomes.

### **What do we mean by ‘doing collaborative research’?**

The composition of the working group participants was predominantly university-based, which suggested that there were some similar goals in our work (to achieve certain research outputs), however there is a degree of flexibility for the way that these goals might be achieved. The group discussed the following important ideas: the nature of the collaboration; the composition of the collaborative group; the different roles and responsibilities; and the important considerations of the location of power and control over the research questions/foci. We acknowledge that, in any funded research project involving teachers, the goals of the collaborative work will differ between the university and the schools – and that it is important for different project participants to be aware of these different goals.

Most of the working group participants described experiences of projects where the focus was informed by ‘research knowledge’ on particular mathematical pedagogies, such as inquiry-based learning, problem solving, realistic mathematics education etc. In these cases, there was an immediate need to gain ‘buy-in’ from key players within the collaboration (the local funder, the school senior leaders/Head of Department, etc.) – and for the findings of prior research to be communicated in a clear and accessible way in a range of formats (leaflets, posters, blogs, web-sites), as appropriate.

The working group had far fewer experiences of collaborative research projects that had been initiated by teachers and schools, which tended to lead to individual Masters and Doctoral projects, although Oxford University does have an ‘open call’ to local schools to initiate collaborative work with researchers, limited to 3 schools per year.

### **Devising communications that bridge the research-to-practice gap**

The working group participants discussed ‘good examples’ of research communications/channels (leaflets, posters, blogs, web-sites, twitter accounts/groups), that might engage teachers with the processes and outcomes of relevant research in clear, accessible and engaging ways – for particular use when establishing (or seeking to promote) research collaborations with teachers.

The following examples were cited:

- The website developed by University of Nottingham colleagues to disseminate research-informed formative assessment resources for mathematics to US teachers (Mathematics Assessment Project).
- The OFSTED book ‘Recent research in mathematics education, 5-16’(Askew & Wiliam, 1995) – no longer ‘recent’, but a useful format.
- UKEdChat website (<http://ukedchat.com/>) and UKEdChat ‘Tweet-ups’ on Thursday evenings from 8-9pm.
- ResearchEd website (<http://www.workingoutwhatworks.com/>).
- ‘Digested reads’ á la John Brace in The Observer.

### **Next steps for the group**

The working group has set itself the following task for the next meeting: bring some research findings, ideally from your own work – and a first draft of a communication that might reach a wider audience. During the working group session, these will be constructively critiqued and further developed.

### **References**

- Askew, M., & Wiliam, D. (1995). *Recent Research in Mathematics Education 5-16*. London: OFSTED/HMSO.
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- Robutti, O., Cusi, A., Clark-Wilson, A., Jaworski, B., Chapman, O., Esteley, C., et al. (for publication 2016). ICME international survey on teachers working and learning through collaboration. *ZDM*, 48(3).