Working Group report: Building and sustaining active research collaborations with teachers of mathematics

Alison Clark-Wilson and Geoff Wake

UCL Institute of Education and University of Nottingham

This BSRLM working group met for the second 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.

Keywords: Collaborative research; teacher inquiry; research-informed practices

Introduction

The working group session was structured 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.
- Sub-group 1: Discussion of the term 'active research collaboration' in relation to the personal experiences of group members.
- Sub-group 2: Working towards some outputs that communicate research outcomes and processes to wider audiences.

In addition, the working group were made aware that the International Commission on Mathematics Instruction (ICMI) had identified the theme, 'mathematics teachers working and learning in collaboration' as one of five international survey topics that would present findings during ICME12 in July 2016 (Robutti, Cusi, Clark-Wilson, Jaworski, Chapman, Esteley, Goos, Isoda, and Joubert 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.

Key related interests for the working group members

The eighteen participants at the working group represented the following professional roles and contexts included:

- Researchers leading large funded research projects involving teachers.
- Teacher educators/researchers supporting teacher networks (Maths Hubs, SCITTs, 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.

Fourteen participants were participating in the working group for the first time. Consequently, the group sub-divided into two, taking the following discussion topics:

1. Developing research links with teachers.
2. Writing for teachers

Developing research links with teacher: Summary of discussion points

The sub-group comprised a mainly international group of researchers (based in the UK, Norway, Japan, Spain and Zambia), which led to a far-reaching discussion that concerned the opportunities and barriers for researchers to engage with teachers/schools as participants in research studies. The discussion highlighted a number of related issues that included:

- What are the rewards or incentives for teachers/schools to act as participants in *somebody else's* research?
- How can researchers (as outsiders) gain access to teachers/schools?
- Who (in England) are the key people that might open the door for researchers to work more closely with schools? Maths Hubs? Teaching Schools? What about in other countries?
- How can teachers be included in the process of the research design?
- How do the institutional constraints on schools/teachers align with the aims/goals for the research?

The sub-group concluded that a 'local knowledge' of the school settings was crucial to be able to begin conversations with teachers/schools about participating in research. Furthermore, in many countries, it was necessary to agree the roles and responsibilities for participants. For example, in Japanese Lesson Study, there was an accepted and established process that formed part of a teacher's professional activity. This contrasted with Zambia, where the researcher was required to negotiate this individually with the school at the beginning of her study.

Writing for teachers

This sub-group started by considering, albeit briefly, some examples of digested summaries of research written for non-academic audiences. In the main these were written for a non-specific audience: in some instances the intention was to inform 'policy workers' or key stakeholders. In such instances in the main the writing summarised the research methodology/warrant and gave a 'punchy' account of findings. In cases where the intended audience was clear, implications for these stakeholders was given. Discussion then focused on writing-up research for teachers. It was acknowledged that university-based researchers were under great pressure to write for academic audiences and to have their work published in academic journals. Furthermore, it was felt that there should be more writing-up of research that speaks more directly to teachers. The group felt that BSRLM should take responsibility for developing part of its website to host such writing. It was considered that the reporting of research from BSRLM day meetings could provide a steady stream of such writing but that there needs to be a pro-active approach to developing this. It was decided that the group convenors should take this forward before the next meeting of the group by developing one or two online examples.

Next steps for the group

It is accepted that the make-up of the Working Group will differ at each meeting. Therefore we anticipate that we will maintain the on-going discussion that concerns the opportunities for researchers to collaborate with teachers and schools as active participants in research studies. For those participants who are returning to the group, there will be an opportunity to share and discuss draft writings for teachers that describe the activities and outcomes of research studies in the form of BLOG entries and other forms of communications.

References

Robutti, O., Cusi, A., Clark-Wilson, A., Jaworski, B., Chapman, O., Esteley, C., et al. (2016). ICME international survey on teachers working and learning through collaboration: June 2016. [journal article]. *ZDM, 48*(5), 651-690, doi:10.1007/s11858-016-0797-5.