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CONNECTING THE LEARNERS’ AND TEACHER’S PERSPECTIVES

Capturing Complex Classroom Interactions

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Background of participation in the LPS

Participating in the Learners’ Perspective Study (LPS) during PhD research provided research opportunities that would otherwise not have been available. The research design captured multiple perspectives on classrooms interactions that enabled study of what supported students during their creation of new (to the student) mathematical ideas. Taking a role in ensuring across country consistency of application of the design protocols gave a broad perspective of what it could mean to teach and learn mathematics. My studies were enriched by these opportunities.

The LPS team has at least one international meeting per year and in some years a Learners’ Perspective Conference in Melbourne, and a retreat to Wilson’s Promontory, which is a peaceful sanctuary in an isolated beach side area in Victoria, Australia. This provided many opportunities for researchers to get to know each other and discuss ideas. This study commenced with researchers from different countries sharing their research perspectives. During the study, we alerted each other to aspects of our country’s data that could be relevant to another’s focus. In addition, we probed interview responses further where we recognised the relevance of a response to another team member. Thus, I had a ‘research team’ who willingly alerted me to data that might be relevant, and sometimes even generated such data (Williams, 2005).

Team discussions about consistency of application of the study design across countries, and my participation in initiatives to gain this consistency, helped me to appreciate how differently a research design can be interpreted without such initiatives.

Visiting Year 8 classrooms in four countries (Germany, the USA, the Philippines and South Africa), focusing intently on classes in two other countries, discussing teaching and learning with research teams, and sharing my own observations about these classrooms from the perspective of my study, broadened my perspective, and helped me to communicate and crystallise my ideas.

LPS Team Membership: developing research rigor

In 2003, when I presented my findings at an LPS conference, I intended to show the importance of ‘spontaneity’ in the creative development of new knowledge. I was surprised to find this group of experts, who were empathetic to my research, did not understand what I was trying to communicate. The questions they asked me, and the density of the subsequent discussion, helped me to realise I needed to develop the concept of spontaneity more rigorously and illustrate it empirically.
The power of the LPS research design

In addition to the multiple perspectives enabling triangulation, the data collection techniques provided opportunities to 'retrieve' data when its significance became apparent. Take the example where the student (Leon) stated:

When you look around the classroom and see how everyone else is doing it and you're doing it a completely different way... and you think ooh! maybe my method isn't the best and... you think about everyone's... and then you think about your own and they all sort of piece together and you just sort of go oh! and it pops into your head (Williams, 2006a, p. 227).

What had Leon seen? Had other students already found what "popped into" Leon's head? Or did he really develop this idea for himself by integrating what he could see on the pages with others with his own developing ideas? A search of the whole class, teacher, and focus-student videos suggested other students were undertaking the problem in less sophisticated ways, but not all student pages were visible on the videos. In her interview, the teacher confirmed that other students had used less sophisticated approaches. Knowing what was on other students' pages assisted my analysis of how Leon developed his insight. Without access to another data source, the conclusions could not have been held with the same strength. Multiple secondary analyses of the data were employed to support interpretations made. The research design contributed to the insights developed.