

Waikato Journal of Education 15, Issue 2:2010

TEACHER–RESEARCHER RELATIONSHIPS AND COLLABORATIONS IN RESEARCH

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ABSTRACT *To understand the complexity of the classroom in ways that might inform teaching research in needed that explains both why and how something works. Teacher–researcher collaboration is essential if this is to happen. Collaborative work can ensure that research builds on from what teachers know and can do. Researchers working with teachers to address their current concerns are more likely to generate insights into what teachers might do and where they might go next. Collaboration can contribute a warrant for relevance for research findings. At the same teachers deepen and enhance their own practice through engaging in the research process. This paper describes and discusses some approaches to collaboration that have enables researchers and teachers to access a diversity of ideas and expertise to their mutual benefit.*

KEYWORDS

Collaborative research, dissemination, practitioner-research

INTRODUCTION

All educational research involves a cooperative relationship of one form or another between teachers, their students and researchers. Teachers can cooperate with researchers by agreeing to complete a survey, being part of interviews or by allowing a researcher into their classroom to observe them at work with their students. Teachers and researchers can also engage more collaboratively by working together on the stories that emerge or in a series of reflective action research cycles. Each of these approaches involves different social arrangements and affords teachers, and researchers, different roles, degrees of agency and voice. They also position teachers and schools in different ways in relation to educational change and reform, which has implications for the nature and potential impact of the research findings.

In the first instance, above, teachers are positioned as relatively passive. In the latter cases they are positioned as active participants in research, teaching and change processes. We have been fortunate in being able to work on research projects where we collaborated with teachers and colleagues on all aspects of the research process (design, data collection, analysis, and reporting). It is our experience that through collaboration all participants have access to a rich source of diverse ideas and a diversity of expertise. Working with others enriches the

understandings we develop through the inclusion of multiple perspectives and experiences. Collaborative research teams can provide a supportive climate that encourages risk taking. They can distribute the workload, making more complex and multifaceted projects possible. As well, we find research that involves collaboration to be a more enjoyable, personally motivating and rewarding process. In this paper we describe and discuss our experiences of working together and with others to better understand the process of teaching and learning.

OUR COMMITMENTS

Our research is informed by the view that reality is socially constructed. Consequently, we view research as a social process of change for all research participants (Somekh & Saunders, 2007; Wagner, 1997). This stance means that we view data as generated rather than being “out there” to be collected, with the concomitant view that the way to generate knowledge is to participate in practice and co-construct meanings along with participants. As Langemeyer and Nissen (2005, p. 189) note, “If thinking is basically a social activity mediated by tools, and research is no exception, the implications is that we always gain understanding through intervention”. In taking this stance we aim for our research to be forward looking so that it builds on current understandings and theory to generate new knowledge. For us, to disengage from practice would undermine the trustworthiness of any knowledge created. In our view it is not sufficient for research to simply identify and describe what works. To understand the complexity of the classroom in ways that might inform teaching, which is one of our main research imperatives, research is needed that explains both why and how something works. We seek both methodological and theoretical robustness realised through impact and value for people (Somekh & Saunders, 2007, p. 185). Teacher–researcher collaboration is essential if this is to happen. Collaborative work can ensure that research builds on from what teachers know and can do. Through engaging in the research process, teachers deepen and enhance their own reflections on their changing pedagogic practices, which brings a much needed real-life perspective to understanding and unpacking the complexities of the classroom (Armstrong et al., 2005). Teachers involved in research are knowledge creators, not just users of other’s knowledge in research publications (Connelly & Clandinin, 1990). Researchers working with teachers to address their current questions are more likely to generate insights into what teachers might do and where they might go next. Furthermore, collaboration can contribute a warrant for relevance for research findings (Edwards, 2007).

Researchers collaborating with teachers

A quick search of the literature, even as recently as 30 years ago, is unlikely to have generated many studies on teacher, or student, perceptions of teaching and learning. The focus at that time was very much one of research on teachers and students rather than research for or with them. The political and research landscape of today is very different. There is a strong emphasis on evidence-based practice and, if possible, teacher engagement with the conduct of research. We have found that teachers and researchers engaging together in practical inquiry can better our

understanding of and enhance teacher practice. Teacher and researcher collaboration can also contribute to a “general knowledge about and understanding of educational processes, players, outcomes, and contexts and the relationship between or among them” (Richardson, 1994, p. 7). When teachers and researchers work in a collaborative partnership to explore and discuss how to enhance teaching and learning, both teachers and researchers gain new insights. As Weiss (1998) has suggested, sustained interaction can transform one-way reporting into mutual learning that bridges the theory-practice divide.

A researcher-driven collaborative study

One example of a researcher-driven teacher–researcher collaborative study is the Classroom Interactions in Science and Technology Education (InSiTE) project (Cowie, Moreland, Jones and Otrell-Cass, 2008). Four of the authors of this paper (Bronwen Cowie, Judy Moreland, Kathrin Otrell-Cass and Alister Jones) participated as researchers alongside 12 teachers from six primary schools in this three-year Teaching and Learning Research Initiative (TLRI) study. One of the aims of the InSiTE research project was to engage with teachers as active participants in all aspects of the research process in order to gain a better understanding of and to enhance teacher assessment for learning (AfL) interactions. The study was structured as a series of cycles of classroom teaching and observation, interspersed with joint teacher and researcher meetings. Classroom work allowed the team to test ideas and reflect on their impact on teacher AfL interactions and student learning. Joint meetings allowed for collaborative planning for teaching and collaborative interpretation of data and discussion of theory. The cycles of interpretation and planning allowed for interpretations and planning to be tested, refined and extended through dialogue between all team members to develop robust understandings and explanations.

The teachers in the InSiTE project taught a science and a technology unit each year. Before the units were taught researchers and teachers met as a group to jointly plan and develop the teaching sequence. During the teaching two researchers were present in the classroom, each focusing on a different aspect of what was happening. For instance one researcher would follow the teacher while the other monitored a particular student or group of students. By sitting in different locations it was possible to generate two different perspectives on what was happening: different locations provided access to different conversations and physical actions. Classroom observation data was generated in the form of researcher field notes, video, digital photographs, and conversations with students.

Before the lessons the InSiTE teachers discussed with the researchers the particular ideas or activities they had planned for. In post-lesson interview conversations with the teachers we raised issues such as significant student actions. The teachers alerted us to conversations and activities they considered particularly interesting, adding an insider perspective to what had happened. The teacher’s interpretation and reflections helped us to better understand what we had observed and documented. In conjunction with these conversations around lessons, six teacher and researcher reflective meeting days were held in each of the three years

of the study. As researchers we presented our emerging findings to teachers as a focus for discussion. The teachers shared their planning and discussed student work samples with us and each other. These meetings were audiotaped and any materials were collected as data. The meetings allowed us to develop and extend our shared understanding of events, to propose and test out explanations and ideas, and to refine the research and teaching focus in light of evidence. Collective consideration of emerging research findings, teacher plans and student work samples prompted rich conversation about the impact and implications of different teacher and student actions, intentions and interactions. Through this collaborative process we were able to tease out more fully the multimodal and temporal aspects of the AfL interactions (Cowie & Moreland, 2007; Moreland & Cowie, 2009). The teachers were keen to share insights gained from their involvement in the research and some of them presented their experiences and research findings at conferences and to their school staff. They received very positive feedback from their peers, some of whom have adopted the practices the teachers described, highlighting the critical role teachers can play in the dissemination of research findings.

In this study the research approach we adopted was that of negotiated intervention (Jones & Simon, 1991). The process of negotiated intervention takes into account teachers' existing beliefs and practices, and focuses on negotiating with teachers the ways in which their practice might be developed to become more effective. New ideas are introduced by researchers as and when teachers need them, to enhance practice within teachers' existing practices. They are also generated through teacher–researcher ongoing reflection on teacher classroom practices. This process allows for the renegotiation of further developments in the light of changing understandings and practices. Throughout this process, teacher and researcher conversations contribute to the development of a language grounded in a common repertoire of examples along with a shared understanding of the goals of the research project as they are evolving.

Over the course of the InSiTE study we came to conceptualise our joint involvement as a partnership in which teachers acted in support of the research process and researchers acted in support of the teaching and learning process. As researchers we were intent on both informing practice and in generating new knowledge. While the teachers participated in the analysis of the data, in the refinement of the research direction, and in the writing up and presentation of research findings to peers, they were more intent on enhancing their practice. They participated as equals who had different but complementary knowledge, experience and goals (Bell & Cowie, 1999). Their participation enriched the research process and added to the likelihood the research would be meaningful and useful to other teachers (Edwards, Sebba & Rickenson, 2007). Acknowledging the different but complementary roles, expertise and purposes within the collaborative process provided an effective way of meeting the needs and expectations of both teachers and researchers (Ancess, Barnett & Allen, 2007). Working collaboratively with the teachers helped us to maintain a focus on the “how”, as well as the “what” and “why”.

A teacher-driven collaborative study

Teacher and researcher relative ability and willingness to set and control the direction of research is always an issue in collaborative research. Only occasionally have we as researchers had an opportunity to collaborate with teachers at their invitation. One such occasion was when an experienced Head of Department became interested in “assessment for learning” and invited Beverley Cooper and Bronwen Cowie to work with him and his colleagues (Cooper and Cowie, 2009). After an initial presentation on assessment for learning, the teachers expressed an interest in being involved in a research project that investigated the impact of assessment for learning on their classroom practice and student learning. The research question that was negotiated to guide the study was: What do teachers see as the impact of their use of assessment for learning on student learning and student motivation and willingness to take more responsibility for their learning? The teachers then developed their own research questions and plans within this framework. One teacher investigated the impact of written feedback, another focused on his questioning and a third worked with students to develop individual learning programmes. The teachers and researchers met regularly to share ideas and experiences and to refine the research and practice focus. Teachers took the main responsibility for data generation. The data generated included student work samples, teacher reflections, student survey and interview data and audiotapes of research team meetings. The teachers produced individual research reports using a template provided by the researchers.

As a result of their involvement in the research project the teachers considered they had developed a greater insight into their students and teaching strategies that contribute to student engagement with their own learning and assessment. The teachers reported that the researcher involvement as external “mentors” had been essential to the success of the project in providing focus and input and monitoring of deadlines. The importance of teachers working with colleagues on a shared agenda to “bounce around ideas and get different points of view” was also highlighted. Although the teachers welcomed our ideas we needed to be continually aware that, in order to honour their initiation of the project, they were in charge of the research agenda. While there were sometimes delays in meeting and following up on proposed action, overall the teachers demonstrated a strong commitment to the project and more readily guided its direction than the teachers in the InSiTE study. We consider that this occurred because the teachers were investigating their own research question and this had immediate relevance to their own practice and the school’s strategic direction. The teachers were very proactive in disseminating the findings of their investigations within the school and at conferences, demonstrating a strong commitment to and confidence in the work. Both teachers and researchers responded positively to the teachers’ descriptions of the research findings, with members of both groups expressing a desire to be involved in this type of collaborative research.

We have been involved in other projects involving groups of tertiary teacher educators that have used a similar structure of a shared overarching question with individual sub-questions. In this context we have found this approach allows for

individual autonomy and at the same time contributes to the sense of belonging to a larger project, with the potential for a broader impact than is likely the case for a study by a single researcher (Bailey et al., 2009).

The challenge of collaborative research with teachers

We have experienced a number of challenges in the type of research collaborations described above. First, the time commitment required by researchers and teachers is substantial. Teachers need to find time to talk after lessons and to attend meetings in addition to any teacher release funding that is provided. Alongside this there are often logistical problems in getting all research partners together when both teachers and researchers face multiple demands on their time. Second, the long-term nature of the InSiTE study had repercussions in terms of involvement of personnel. Over the course of the three years, six of the 12 teachers left the project for a variety of reasons including promotion and travel. Also the composition of the research team changed, somewhat influencing the direction of the research. Third, the extent to which teachers are prepared to take risks, share their ideas, feelings and opinions depends on the nature of the relationship that develops between teachers and researchers. Mutual trust, respect and rapport are essential. In our experience, prolonged engagement, persistent observation and member checking (Bell & Cowie, 1999; Guba & Lincoln, 1989) contributes to this. Prolonged engagement ensures a researcher has substantial involvement in the setting and so they are able to build confidence and rapport and to develop sensitivity to the situation and people's responses. Persistent observation allows researchers to identify which issues are of the most salience in order to study them in more depth. Member checking involves comparing data interpretations with participants because, at the very least, they need to recognise the meanings attributed to them (Cole, 1996). On the other hand, using strategies such as this to foster trusting relationships and open communication brings with it the responsibility to care for research participants and to ensure they and their community are not placed in a situation of potential harm from what might have been done or disclosed as part of the research, in either the short or the long term.

Working together in classrooms as practitioner-researchers

Practitioner research is currently gaining prominence as a viable and valuable research approach (Borko, Liston & Whitcomb, 2007; Loughran, 2007). Practitioner research blurs the boundaries between research and practice so that practitioners are able to "construct own questions, interrogate their assumptions and biographies and continuously re-evaluate whether a particular solution or interpretation is working and to find another if it is not" (Cochran-Smith & Donnell, 2006, p. 510). Questions about practice are a primary focus for practitioner inquiry but research questions can also encompass how practitioners theorise their own work, along with the assumptions and decision they make, and interpretations they construct about student learning (Cochran-Smith & Donnell, 2006). To be seen as authentic, practitioner research requires multiple sources of data, a rigorous

approach to data analysis, and evidence that the researcher has examined her biases and how these might affect data collection and analysis.

An example of practitioner research

Merilyn Taylor and Bronwen Cowie undertook a collaborative research study of their teaching of a Year 2 Mathematics Education class. The research built on a previous study where they had each collected data and then worked together to analyse the teaching of lessons they had planned together (Taylor & Cowie, 1997). The decision to co-teach a class came about because they wanted to extend the depth of their understanding of how to challenge and support student teachers in the exploration of the relation of mathematics to their lives, and how mathematics might be taught to young children.

Co-teaching as part of a practitioner research process allowed for a cycle of in-depth evaluation and analysis of teaching events in a context where insights gained fed into planning for the next lesson. In contrast to the InSiTE study, Merilyn and Bronwen as practitioner-researchers were able to test out the implications of their analyses through the enactment of their planning for teaching. They quickly found there was a need for reciprocal understanding about what they thought students needed to achieve and what mathematical ideas they hoped students would understand. They needed to plan and prepare for coherent learning experiences that they each understood pedagogically and mathematically. When they were teaching together they found they took more risks. Working as a team they modeled collaborative teaching based on multiple perspectives, seeking out each other's ideas and reflecting on them openly in class. Students appeared to appreciate this approach and the classes were characterised by rich dialogue. Overall, the experience of collaborating to teach and research together impacted positively on the teaching and research process because, as practitioner-researchers, they became more disciplined at noticing significant factors during class time.

With regard to the research process, the notion of story weaving evolved and proved to be a useful metaphor for helping to articulate, make sense of and theorise individual experiences of co-teaching and also to create a joint story of professional learning (Taylor & Cowie, 1997). Connolly and Clandinin (1990) proposed that joint storying and restorying enables each voice to be heard. Events were storied after each class when they were fresh. Being able to talk about the same incidents supported a stronger focus on what happened, and why and how than had describing events from lessons experienced separately to each other. Reviewing each class session, then storying it again, provided the means to re-create and re-visit classroom incidents. Meaning was not always made within the classroom setting but often emerged from later reflections and reworking. This aspect was enriched when Bronwen and Merilyn found they held strikingly different interpretations of the same event. In this way, the collaborative storying process ensured that data were intentionally and systematically recorded and analysed from the point of view of two insiders, rather than one, thereby enhancing the trustworthiness of the research process. Presenting findings to colleagues was also important (Shulman, 2000).

Collaborating to write

Writing is a central component of all research. In the case of collaborative research the question emerges as to whether and how collaboration might extend to this component. In projects with teachers, we usually follow up our collaborative classroom observations by talking with the teachers about the observed lesson and then sitting down together as researchers to tease out and write up our individual and collective reflections and analysis. Only rarely do we as researchers prepare separate sections of text that are then combined into a single document. The writing process following a series of classroom observations usually takes place over a period of three to four weeks and is supported by individual independent reading. While there are individual differences in our perspectives and interests, writing usually proceeds through an iterative process of joint brainstorming of key ideas and their linkages. The real value of collaborative writing is in the interactions that take place: themes and storylines emerge through the writing process. During the writing process we each contribute ideas and phrasing. In this process we draw on our shared interests and theoretical orientations and on our different educational backgrounds and commitments. For each of the projects described above, it has been important that there has been some diversity and some overlap between us in these aspects. Our different interpretations of and disagreements over words, phrases and sentences, as well as the overall organisation of ideas and issues, often led to vigorous discussions and debates. Because we needed to come to a shared agreement over meaning and the words and organisation that best expressed this meaning, we needed to listen carefully to each other. This involved each of us in clarifying our own ideas, testing out our ideas with each other and then evaluating what worked. In this way there was always an audience for what was being written—we were simultaneously readers and writers. We consider that writing collaboratively in this way produces a more coherent, analytical and sophisticated text. More than this, we experience this process as stimulating and enjoyable.

More latterly, we have written collaboratively with the teachers we work with. In the final year of the InSiTE study individual teachers collaborated with the researcher who had worked with them in their classroom to write up together an aspect of their classroom work that interested them and that they considered would be of value to other teachers. The teacher and researcher worked together to review the available data and identify “telling examples” (Mitchell, 1984) and to craft a story around these. By participating in the collaborative writing, the teachers were encouraged to reflect on their practice and to interrogate and analyse their lessons in a more systematic and sustained way. They considered this had important repercussions for their classroom practice and enabled them to give helpful and informed advice to other teachers.

CONCLUSION

Collaborative research is an effective means for generating insights into teaching and research. When teachers and researchers work to understand and enhance classroom practice through collaborative research they come to understand their own, and each other’s practices in new ways. Teacher understanding of what

constitutes trustworthy research and how research findings might relate to and be adapted to their context is important. All the more so when research is increasingly being made available to them through teaching resource websites such as Te Kete Ipurangi (TKI). Teachers of their own accord are accessing research to inform their practice (Cowie et al., 2009). In this situation, the notion of research capability relates just as much to teachers, schools and policy makers as it does to educational researchers (Munn, 2008). Research collaborations provide a mutually productive means of enhancing teacher research literacy. They can enhance teachers' capacity to understand, critique and act on research. Added to this, collaborative research allows for in-depth member checking of findings whilst at the same time contributing a warrant for relevance. As Weiss (1998) has suggested, sustained interaction can transform one-way reporting into mutual learning. It can also aid the dissemination of research findings as more teachers are committed to the value and use of research. Collaborative research can advance knowledge and theory and contribute to new insights for theoretically grounded and productive practice.

Working in collaborative environments with teachers has many benefits to researchers. When teachers and researchers work together information can be exchanged in a cyclic, iterative and interactive manner (Lesh & Lovitts, 2000). Such a two-way relationship between research and practice can bridge the theory-practice divide (Weiss, 1998; Nutley, 2003) through the sharing of multiple perspectives and responses to the same data. Building mutually respectful and trusting environments enables researchers to go beyond surface learning to deep understandings. Teachers become more aware of the research process, the necessity of collecting data methodically and the associated ethical constraints, and similarly researchers gain a better understanding of the constraints on teachers in classrooms and schools. All four projects described have shown researchers that working collaboratively with teachers in unpacking understandings of how classrooms work has enabled the researchers to gain understandings of teacher practice and student learning. This in turn has assisted in catalysing and informing the development of further research questions and further projects. The InSiTE project, for example, has informed the development of the New Zealand Science Learning Hub and has also led to further TLRI initiatives. The findings of the projects have informed the practice of the researchers as they work with initial teacher education and professional development.

The current political context is supportive of research collaborations between researchers within the same and different institutions and between teachers and researchers. We have been fortunate to be involved in a series of collaborative projects, which have allowed us to deepen and extend our understanding of classrooms, particularly classroom interactions and effective teaching practices. Our learning and theorising has been cumulative. We have built from one project to the next, most notably from LISP (Assessment) (Bell & Cowie, 2001), LITE (Jones & Moreland, 2005) and InSiTE (Cowie et al., 2008). Through this process we have not only gained knowledge and expertise in educational research, but also friends who share our commitment to enhancing student learning and with whom we can take the risks and engage in the deep thinking required to do this.

REFERENCES

- Ancess, J., Barnett, E., & Allen, D. (2007). Using research to inform the practice of teachers, schools, and school reform organizations. *Theory into Practice*, 46(4), 325–333.
- Armstrong, V., Barnes, S., Sutherland, R., Curran, S., Mills, S., & Thompson, I. (2005). Collaborative research methodology for investigating teaching and learning: The use of interactive whiteboard technology. *Educational Review*, 57(4), 455–467.
- Bailey, J., Blakeney-Williams, M., Carss, W., Cowie, B., Hawera, N., Hunter, P., ... Wynyard, J. (2009, December). *Working with student-teachers on the front end of the New Zealand curriculum*. Paper presented at the NZARE Conference, Rotorua.
- Bell, B., & Cowie, B. (1999). Researching formative assessment. In J. Loughran (Ed.), *Researching teaching: Methodologies and practices for understanding pedagogy* (pp. 198–214). London, England: Falmer Press.
- Bell, B., & Cowie, B. (2001). *Formative assessment in science education*. Dordrecht, The Netherlands: Kluwer.
- Borko, H., Liston, D., & Whitcomb, J. (2007). Genres of empirical research in teacher education. *Journal of Teacher Education*, 58, 3–11.
- Cochran-Smith, M., & Donnell, K. (2006). Practitioner inquiry: Blurring the boundaries of research and practice. In J. L. Green, G. Camilli, P. Elmore, A. Skukauskaitė, & P. Grace (Eds.), *Handbook of complementary methods in education research* (pp. 503–518). Washington, DC: AERA & Mahwah, NJ: Erlbaum.
- Cole, M. (1996). *Cultural psychology: A once and future discipline*. Cambridge, MA: Harvard University Press.
- Connelly, F. M., & Clandinin, D. J. (1990). Stories of experience and narrative inquiry. *Educational Researcher*, 19(5), 2–14.
- Cooper, B., & Cowie, B. (2009). Collaborative research for assessment for learning. *Teaching and Teacher Education*, 26(4), 979–986.
doi:10.1016/j.tate.2009.10.040
- Cowie, B., Hipkins, R., Boyd, S., Bull, A., Keown, P., McGee, P., ... Yates, R. (2009). *Curriculum implementation exploratory studies: Final report*. Retrieved from <http://www.educationcounts.govt.nz/publications/curriculum/57760>
- Cowie, B., & Moreland, J. (2007). It's a kiwi: Multimodal approaches to exploring and extending young children's science ideas. *Australian Early Years Research Journal*, 14(2), 37–47.
- Cowie, B., Moreland, J., Jones, A., & Otrrel-Cass, K. (2008). *The classroom InSiTE project: Understanding classroom interactions to enhance teaching and learning in science and technology in Years 1–8*. Wellington, New Zealand: Teaching and Learning Research Initiative.
- Edwards, A. (2007, April). *Conceptualising user engagement in educational research: Working on the boundaries*. Paper presented at the AERA Annual Meeting, Chicago, IL.

- Edwards, A., Sebba, J., & Rickenson, M. (2007). Working with users: Some implications for educational research. *British Educational Research Journal*, 33(5), 647-661.
- Guba, E., & Lincoln, Y. (1989). *Fourth generation evaluation*. Newbury Park, CA: Sage.
- Jones, A., & Moreland, J. (2005). The importance of pedagogical content knowledge in assessment for learning practices: A case-study of a whole-school approach. *The Curriculum Journal*, 16(2), 193–206.
- Jones, A., & Simon, S. (1991). Strategies for educational change: The work of the OPENS project in the context of a new national curriculum for science. In A. Begg, B. Bell, F. Biddulph, M. Carr, M. Carr, J. McChesney & J. Young Loveridge (Eds.), *SAME papers (pp. 15–35)*. Auckland, New Zealand: Longman Paul.
- Langemeyer, I., & Nissen, M. (2005). Activity theory. In B. Somekh & C. Lewin (Eds.), *Research methods in the social sciences* (pp. 188–196). London, England: Sage.
- Lesh, R., & Lovitts, B. (2000). Research agenda: Identifying priority problems and developing useful theoretical perspectives. In A. Kelly & R. Lesh (Eds.), *Handbook of research design in mathematics and science education* (pp. 45–71). Mahwah, NJ: Erlbaum.
- Loughran, J. (2007). Researching teacher education practices: Responding to the challenges, demands and expectations of self-study. *Journal of Teacher Education*, 58(1), 12–20.
- Mitchell, J. (1984). Typicality and the case study. In R. Ellen (Ed.), *Ethnographers guide to conduct* (pp. 237–241). San Diego, CA: Academic.
- Moreland, J., & Cowie, B. (2009). Making meaning in primary technology classrooms through assessment for learning. In A. Jones & M de Vries (Eds.), *International handbook of research and development in technology education* (pp. 461-476). Rotterdam, The Netherlands: Sense Publishers.
- Munn, P. (2008). Building research capacity collaboratively: Can we take ownership of our future? *British Educational Research Journal*, 34(4), 413–430.
- Nutley, S. (2003, April). *Bridging the policy/research divide: Reflections and lessons from the UK*. Paper presented at the National Institute of Governance Conference, Canberra, ACT, Australia. Retrieved from www.st-andrews.ac.uk/-ruru
- Richardson, V. (1994). Conducting Research on Practice. *Educational Researcher*, 23(5), 5–10.
- Shulman, L. (2000). From Minsk to Pinsk: Why a scholarship of teaching and learning? *The Journal of Scholarship of Teaching and Learning*, 1(1), 48–53.
- Somekh, B., & Saunders, L. (2007). Developing knowledge through intervention: Meaning and definition of ‘quality’ in research into change. *Research Papers in Education*, 22(2), 183–197.
- Taylor, M., & Cowie, B. (1997, December). *Three dimensional story weaving*. Paper presented at the NZARE Annual Conference, Dunedin, New Zealand.

- Wagner, J. (1997). The unavoidable intervention of educational research: A framework for reconsidering researcher-practitioner cooperation. *Educational Researcher*, 26(7), 13–22.
- Weiss, C. (1998). Have we learned anything new about the use of evaluation? *American Journal of Education*, 19, 21–34.

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