

When Research Met Practice



by **Lisa Hagedorn**

In Ottawa last year, two colleagues and I worked on a project called *An Exploration of Collaborative Materials Development in Adult Numeracy Teaching*. Collaborative Materials Development involves a resource teacher and several classroom teachers making learning materials, reading a variety of texts to explore ideas that come up, and reflecting on this work in writing. I acted as the resource teacher—not teaching, but making learning materials for and with the other two teachers, Dianne Bertrand and Bernadette Walsh, and guiding their reading and reflection. The three of us produced four units of adult numeracy learning materials, notes for teachers to go with each activity, a presentation and a project report. We've shared these with the field through a second presentation, a web page and paper documents.

In our project plan, we said we would engage in research, without being specific. Getting more specific than that required that we wrestle with the concept and the processes of research. In this article, I describe some of the 'rounds' we went in this wrestling match.

Round 1: Taking time to reflect and read

At first, we had to force ourselves to take breaks from making and trying out learning materials, to reflect on what we were doing, and to read about ideas that came up. But, after reflecting and reading on a few occasions, we began to look forward to it as a satisfying pause in which we could recognise what we'd been doing, think about it, and build on it.

Round 2: Balancing reflection and reading with making learning materials

Once we recognized the value of including reflection and reading with our practice, we had to consciously balance them. If we weren't careful, one (reflecting and reading) or the other (making and trying out learning materials) would take over. This happened very clearly when we took our work to outsiders—at first it happened by accident, but then we started to control whether one or the other dominated a particular interaction. Our first advisory committee meeting looked much more at our learning materials than our reflections and reading.

A practitioner remembers learning math as a child:

I don't remember anything about math in elementary school other than learning the multiplication tables in, I think, grade two. I was very afraid of my teacher and she threatened to punish anyone, usually with a ruler on the knuckles, who didn't know the assigned table by the next day. I remember weeping and wailing as my mom practiced with me. Welcome to math.

-Dianne Bertrand

Then, our second advisory committee meeting didn't look at the learning materials at all; rather, it focused on the process, not the content, of our reflections and reading—mostly on the fact that we'd done them and what that could mean to practitioners and the field. Then, when we presented our work to local practitioners, we focused more on our learning materials than on our reflections and reading.

Round 3: Were we really doing research?

Dianne, one of the classroom teachers, looked for evidence of research around her. She wrote, "I feel like I am researching when I scour the internet for ideas. When I am making and testing the materials, I feel like a teacher, not a researcher." She didn't see evidence of research in conversations among colleagues, or in professional development days. She did see it in articles she had skimmed.

This is representative of our initial, general sense that research was mostly at some remove from what we were doing. But when we began to read about research in practice, our sense changed. Below are two excerpts from our reading that invited us to think we were actually doing research in practice.

We found a definition in *A Framework to Encourage and Support Practitioner Involvement in Adult Literacy Research in Practice in Canada*, by Jenny Horsman and Mary Norton (p. 2). Here it is:

We use the term research in practice to include a range of ways that practitioners might engage in research, but also to explicitly identify reading and reflection as important ways for practitioners to engage with research. Research in practice includes

- reading and responding to research

- reflecting on practice in light of research
- applying research findings to practice
- doing research about practice

We think it is particularly important to include reading and reflecting as part of research in practice.

This definition fit, in many ways, with what we were doing: we were reading and responding (but not always to research—sometimes to policy documents, or to books); we were reflecting on practice (but not always in light of research); we were applying ideas to practice (but the ideas weren't always research findings); and we were doing research about practice (if reflecting and reading that are inspired by practice can be called research).

We also identified with the following passages from Richard Darville's background piece "Making Connections" in the first issue of *Literacies* (pp. 3-4):

The term research...encompasses a broad range of activities. It includes all the ways in which people concerned with adult literacy practice re-search—look again, articulating and clarifying what they know, and pushing out into the unclear and the unknown.

Research includes...the many ways that practitioners look again—especially when they leave a public record of their learning, whether in an 'article,' teaching materials or workshops.

When we begin to connect a broad understanding of practice with a broad conception of research, the first thing we recognize is that much of practice already includes research. It is research when teachers experiment with learning materials, with the phrasing of explanations, or with learner involvement in program organization, and make findings about what works. It is research when practitioners carry on discussion and debate, seeking to share and to clarify their understandings, or to pose and address problems.

We indeed were looking again, and trying to articulate what we knew—and we definitely felt like we were "pushing out into the unclear and the unknown." We would also be leaving a public record of our learning (teaching materials, project reports, a web page, a workshop and now this article).

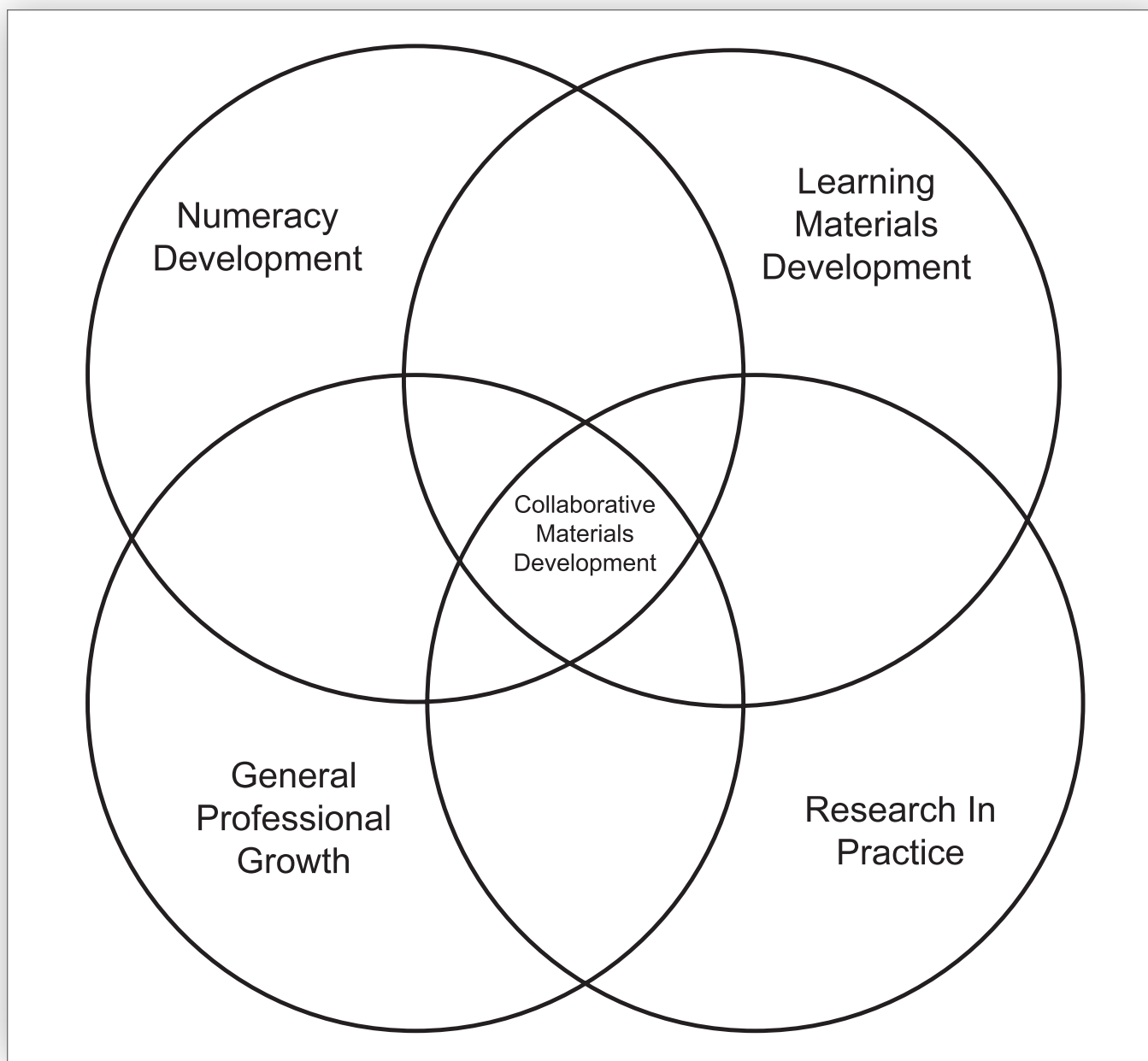
Finally, what allowed us to confidently say that we were doing research in practice was that our advisor, Maria Moriarty, whom we trusted, said, "This is real

research in practice.” It really helped to hear it from a person who had seen our work and who we believed knew what she was talking about.

Round 4: Distinguishing among practice, research and professional development

Having accepted that we were doing research in practice, we still had the impulse to try to identify what part of our work was research, and what was practice. Also, we felt that we were engaged in a

third category of activity: professional development. Though at first it seemed clear that making learning materials was our practice, and reflecting and reading were our research, these activities overlapped, and the third category of ‘professional development’ further complicated things. Richard Darville’s statement, quoted above, that “much of practice already includes research,” helped us begin to relax about trying to distinguish among practice, research and professional development. Eventually, from a feeling that research was at some remove from what we were doing, we moved to feeling that it was in



everything we—all of us, even the learners—were doing, and that professional development was laced throughout, for us the practitioners.

Creativity is a type of learning process where the teacher and pupil are located in the same individual.

Arthur Koestler (1905-1983)

One might imagine a huge room: in the middle of the room is a stage supporting sets that represent Bernadette's classroom, Dianne's classroom, a meeting room and our three home offices. The stage is open on all four sides, and chairs are set up to view it from all four sides. Bernadette, Dianne, their learners and I work away on the stage, making and trying out learning materials, reflecting, reading, talking. A different group of people watches from each side of the stage, and, periodically, one of us leaves the stage to sit with one of these groups.

- The group on the first side is made up of literacy practitioners; they're talking about the activities they saw us do with the learners and the teaching strategies we used.

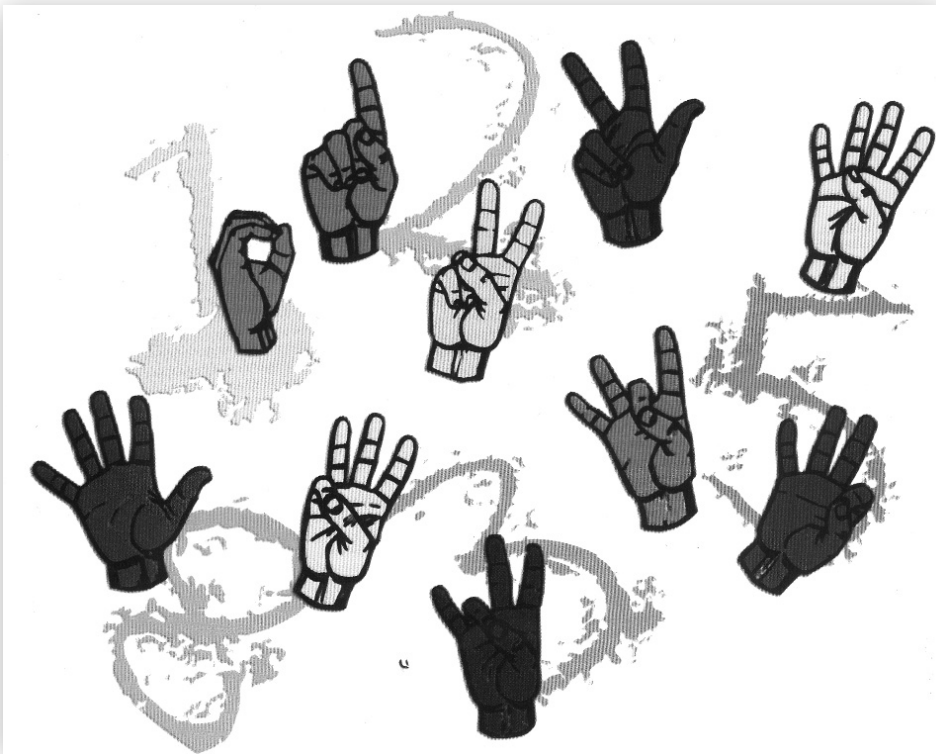
- The group on the second side is made up of researchers; they're pointing out where particular learning theories are manifested in what we're doing, they're happy to see that Bernadette (the other classroom teacher) is exploring 'math talk' and documenting its importance in her adult numeracy teaching, and they look forward to analysing our written reflections.
- The group on the third side is made up of program administrators and provincial ministry staff; they're talking about ways to share what we're doing with the wider field, and whether Collaborative Materials Development fits with program policies and development initiatives, as well as whether it's affordable.
- The group on the fourth and final side is made up of learners; they're talking about how they would feel if they'd done the activity they just saw our learners do.
- Standing scattered around behind the four seated groups are several kinds of people: professors of math education, social justice advocates, employers—all seeing different things in our work.

Research in practice had us up on the stage creating the action, stepping off the stage to consider the action from different points of view, and returning to the stage with what we'd learned offstage. This image helps resolve our struggles to put parts of our work into the separate categories of practice, research and professional development. One thing we do may serve all three purposes.

Round 5: Writing it up

But our work couldn't remain so all-seeing and all-encompassing. This became most clear when it was time to write a report on our work.

Our work is written up in two places: in the "notes to the teacher" that accompany our learning materials, and in our report, *An Exploration of Collaborative Materials*



The cover illustration from *Numbers Talk: A cross-sector investigation of best practices in LBS numeracy* by Barbara Glass and Lynne Wallace (2001). Toronto: Ministry of Training, Colleges and Universities.

Development in Adult Numeracy Teaching. Our most practice-related findings are in the notes to the teacher—it was clear to us what had to be in these, and what a good format was. Our other findings are written up in our report. What exactly these were, and what format of report they should be written up in, were not as clear to us. An advisor suggested that we use research in practice as the organizing structure for our report. This required us to face again the question of how research was part of our work: was it the overarching organizer of our work, and so should it be the overarching organizer of our report, or was it just one of several components of our work? And, if we decided to use it to structure our report, what would that structure be, exactly? Research in practice, and qualitative research in general, seem to encompass an infinite number of research designs and report formats. So many of them connected, to some extent, to what we had done. For example, qualitative observational research, narrative inquiry, ethnography, grounded theory, descriptive inductive research. Which one would have been best? None of them? Was it invalid or unethical to choose a particular report format when we hadn't followed a corresponding research design? Would an experienced university-based researcher have been able to look at our work, give it a name, and prescribe a report format? Would that format have suited all of our potential readers? The idea of research in practice had allowed us to explore so much that we were now drowning in it—or had I just planned poorly? I had definitely underestimated the potential for research within the Collaborative Materials Development model.

Without the time or money to consult a university-based researcher—the person I felt could help sort all this out—I decided not to fumble with a form that I was not adept at using and thereby undermine what I thought was interesting work by presenting it in a glaringly amateurish way. I stepped away from the idea of using a research report format. Instead I wrote up what we had done and learned, organized partly by topic and partly chronologically, across an introduction and four chapters: Chapter 1, Developing Adult Numeracy and Learning Materials; Chapter 2, General Professional Development; Chapter 3, Research in Practice; Chapter 4, Future Directions. As you can see, research in practice was put in its own chapter. The subheadings in that chapter are questions, and some are based on subsections of traditional research reports:

Are we doing research in practice?

What is our research design?

Who is the researcher, or who are the researchers?

How the practitioners were affected by the project:

Dianne Bertrand:

The [advisory group] meeting gave me an appreciation of the research side of adult education. Although I have read articles before, I really didn't have much idea of the kind of research being done or how much is being done. Listening to the advisors talk made me feel part of something important. I felt very good about the project by the end of the meeting.

Bernadette Walsh:

I think the whole project is affecting my work. I think this meeting [the first advisory meeting], and the subsequent readings you have provided, helped me see that what we are doing is something that is needed. Collaborative materials development, collaborative research, research in practice, and inclusion of adult learners in the process are all aspects of current literacy trends.

What the practitioners now say about research in practice:

Dianne Bertrand:

I see the value of reflecting on my teaching more than I did before I worked on the project. Again, reflection is more valuable when you are going to repeat the lesson to a different group of students and make improvements to the lesson. Reflecting, especially on problems, is also more rewarding when...someone who can help solve the problems [is] reading the reflections.

Bernadette Walsh:

Research in practice is a way of actively learning from what I'm experiencing daily—to take the time to see what is in front of me, and to truly assist the adults in the programs to achieve their goals.

One practitioner's reflection:

Mid-project, Bernadette Walsh wrote:

I realize 'talking maths' is difficult for me. When I am in the classroom (such as at the board) I freeze when a student asks me a process question and I don't know how to explain it. When this occurs, I become afraid of encouraging conversation because I don't know which way the conversation/problem – solving will go and we might come up with the wrong answer. Like my students, I am afraid of being seen not to know in front of others. I want to develop an exploratory approach so that I can learn how to do numeracy talk with my students.

At the end of the project, she wrote:

Reading over the first reflections, the importance of communication struck me. In my opinion, it is 'talking math'—whether individually (intra-personal), with family, in the community (store) or in the classroom (all interpersonal examples)—that is the first numeracy goal for a literacy instructor. Increasing the adult learner's comfort level would increase their confidence in 'doing math.'

Congratulations

to our nominees for the
**2004 National
Magazines Award**

Best Personal Journalism:

*Nancy Cooper for
"Skunk Girl Goes to School"
(Literacies #3)*

and

Best Editorial Package:

*All contributors to
"Focus on...Health and Wellness"
(Literacies #4)*

What is the research question?

What are our data and methodology?

What are our findings?

The headings are not in question form simply to set up our succinct answers; each more or less remains an open question as it is explored in the paragraphs that follow each one.

This was the best I could do, I felt, to give our work form and yet remain true to its different facets while communicating with the variety of readers we hope our report will reach. Though at moments it felt like an unsatisfactory compromise, looking back, I think it is a reasonable representation of our process and struggles as newcomers to research in practice.

Closing

In several ways, our experience with research in this project parallels our experience with mathematics...but that's a whole other article! Both are powerful entities, often thought to be engaged in only by highly-skilled people. What enabled us to step into the ring with them was that learners needed us to teach numeracy more often and better, funders had indicated their support by funding our work, we three practitioners supported each other, people who saw our work gave us positive feedback, and, finally, the idea of research in practice validated our learning and contributing this way. If we were initially tentative, then alternately stiff and wild in our engagement with research, we have now limbered up, trained intensely, and are eager for our next match. ■

An Exploration of Collaborative Materials Development in Adult Numeracy Teaching is available online at www.ocdsb.edu.on.ca/Continuweb/ESL/adultn.htm. The next phase of this project will create an on-line course, *Developing Adult Numeracy*, to support literacy practitioners in teaching numeracy. The course will be finished late in 2005.

Lisa Hagedorn has worked in adult literacy and numeracy in Ottawa for thirteen years, mostly with the Ottawa-Carleton District School Board. For eight of those years she was an instructor, and, since 2000, she has been working on research and development projects related to practitioner development and adult numeracy policy and practice.

SOURCES:

Darville, Richard (2003). Making Connections, *Literacies #1*, spring, 3-4.

Horsman, Jenny, and Mary Norton (1999). *A Framework to Encourage and Support Practitioner Involvement in Adult Literacy Research in Practice in Canada*. Edmonton: Learning Centre Literacy Association.