

Action Research Supporting Students' Oral Language in Northern Canadian Schools: A Professional Development Initiative

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Interview, document, and observational data were used to examine grade K-2 teachers' and literacy coaches' perceptions of the benefits and challenges of collaborative action research as a professional development initiative in rural schools. Eleven teachers and five literacy coaches in five northern Ontario school districts participated in collaborative action research supported by a university facilitator/researcher. Their goal was to enhance their teaching practices to support K-2 students' oral language development. The collaborative action research approach proved to be a relatively inexpensive and effective professional learning forum for the rural teachers, who had limited opportunities for formal professional development because of geographical distances between individual schools and major urban centers. The time commitment, often a challenge in action research, represented a particular constraint to rural teachers because of their heavy curricular responsibilities.

Geographic distances between schools present unique challenges to rural school districts in isolated regions as districts seek to support their teachers' professional learning. The cost of transportation to bring teachers together for district-wide conferences and workshops is prohibitive, and teachers often need a full day of released time just to travel to and from a central location to attend these events. In addition, speakers from urban locations may be hesitant to travel long distances on small planes to reach rural locations, and the cost for school districts to cover their transportation expenses is high. Moreover, the geographic distances that school district consultants must travel to meet teachers in their schools require a great deal of time throughout a given week, so rural northern teachers have less access to school district consultants than their urban counterparts (Clarke, Imrich, Surgenor, & Wells, 2003).

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Given the obstacles to providing traditional forms of professional development, rural school districts may consider collaborative, teacher-directed action research as an alternative. Action research harnesses the strong sense of community, often characteristic of teaching staffs of rural schools, to develop successful and sustained collaborative practices for school improvement (Chance & Segura, 2009). Collaborative action research draws on the professional expertise of teams of teachers who are mentored by an experienced colleague or university facilitator/ researcher who serves as a mentor. The action research projects are teacher-directed, and the teams of teachers meet in their schools. Much of the support provided by the mentor takes place through regularly scheduled telephone calls and online meetings, although teachers may contact their mentor at any time. This type of professional learning initiative addresses the rural-urban gap in teachers' access to resources, as action research has the potential to build "expertise in instructional practices through interactive, systematic and collaborative means" (Clarke et al., 2003, p. 26).

Addressing a well-documented need for research that examines ways to support rural teachers' professional learning and promote student achievement (Arnold, Newman, Gaddy, & Dean, 2005; Harmon, Henderson, & Royster, 2003; Stockard, 2011), this article reports on an action research professional development project in

five rural school districts in northern Ontario, Canada. The overarching goal of this research was to examine the benefits and shortcomings of an action research initiative for grades K-2 students' oral language development through the perspectives of 16 teachers.

The action research project was a follow-up study to a three-year professional development initiative funded by the provincial Ministry of Education. The initial three-year initiative did not involve action research. Instead, an expert in the field presented workshops each year at central locations, and participating teachers were given released time to travel to and attend the workshops. Teachers were also given resources published by the expert, and a full-time Oral Language Coordinator was hired by the five school districts to visit classrooms and assist teachers in carrying out the recommended teaching practices.

To understand the impact of the collaborative action research on teachers' learning, it is necessary to examine their research practices and results of their research. The following research questions reflect the integrated purposes for the study.

1. In an initiative focusing on developing K-2 students' oral language across five school districts, what are participating teachers' and literacy coaches' action research questions, their teaching interventions, and data collection and analysis methods? What are their findings regarding student oral language and writing development?
2. What are participating teachers' and literacy coaches' views on the benefits and challenges of action research, and what recommendations do they make for future action research initiatives in rural schools?

This article provides information about the methods used to support action research, a summary of participants' new teaching practices and professional learning, and a discussion of participants' observations regarding the impact of their action research on students' learning. It ends with a set of considerations and suggestions for rural administrators who are considering implementing action research as a professional learning initiative.

Literature Review: Teacher-Directed Collaborative Action Research

When conducting collaborative action research, teachers engage in reflective inquiry, often with the guidance of an experienced colleague or a university facilitator/ researcher who serves as a mentor. According to Burns (2010),

“*action* lies at the heart of the process, as it is the strategies, behavioural changes and reflections that are put in place to explore or investigate a social situation that forms the basis for the *research*” (p. 3). Underpinning action research is an assumption that active participation and opportunities to reflect on experiences and assumptions are integral to adult learning. Specifically, teachers gather evidence and make decisions regarding whether it supports or challenges the effectiveness of particular teaching practices for their classroom context (Elliott, 2001).

Although action research has distinct benefits for teachers' professional learning, it is a very time-intensive process for teachers. Consequently, one of the biggest obstacles to teachers' participation in action research is setting aside the time to be actively involved in the research process, to collaborate with colleagues, and to reflect on the data (Goswami & Rutherford, 2009; Peterson, Marks Krpan, & Swartz, 2010). Rural teachers, who often have responsibilities for teaching a wide range of subjects and grade levels, may find it particularly difficult to carve out the time necessary to engage in action research (Clarke et al., 2003).

A second assumption underpinning collaborative action research is that learning opportunities should honor and build on teachers' existing knowledge and experience (Thohahoken, 2011). In collaborative action research, teachers' knowledge about their students, classroom context, and teaching provide the foundation for research decisions (Somekh & Zeichner, 2009). Mentors may provide resources and ideas that would not be available otherwise because of teachers' limited time for professional reading and lack of research experience. Mentors do not, however, take the lead in conducting the research. Instead, they are considered co-researchers who value and seek to draw on teachers' professional knowledge and expertise.

A third assumption is that local knowledge is essential for accurate understanding of student needs within specific classroom contexts (Hughes, 2003). When teachers conduct action research, the focus is on the learning of students within particular classrooms. Teacher-researchers have in-depth knowledge of their students and their specific classroom context. They are able to gather data daily and observe students systematically and regularly over long periods of time. Pedagogical knowledge gained through randomized controlled trials is often not as richly contextualized as that gained through collaborative action research. For this reason, the application of knowledge generated by the teacher's own action research should be valued alongside that generated through other research approaches (Hargreaves, 1997; Noffke, 1997).

Action research starts with practical questions that come out of teachers' everyday work (Altrichter, Posch, & Somekh, 1993). Mentor can assist with the generation

of research questions by suggesting potential topics or by providing possible research questions that teachers can adapt to their classroom contexts. Teachers then discuss with colleagues and the mentor how they will implement new practices or refine familiar approaches, drawing on their professional experiences and knowledge to determine a research focus. Later in the process and with mentor guidance, teachers assess the impact of their new teaching practices by analyzing data they have gathered systematically (Capobianco, 2007). The challenge of action research lies in isolating the effects of the innovative practice on student learning. Teachers carry out many different practices related to their action research innovation, so it is often difficult to draw definitive conclusions about the impact of the new practice on student learning.

Through participation in action research, teachers become more skilled in gathering and assessing evidence of student learning and in using this information to refine and improve their teaching. Action research also fosters teachers' greater confidence in their practice, a stronger sense of professionalism, and a greater depth of knowledge (Furlong & Salisbury, 2005). Teachers' professional growth is enhanced not only through adding materials and instructional methods to their teaching repertoires, but more importantly, through opportunities to reflect with each other and with their mentor to make sense of their experience and develop their own theories and principles of effective practice. Through their participation in action research, teachers "become theorists who articulate [their] intentions, test assumptions, and find connections with practice" (Goswami & Rutherford, 2009, p. 3). In the process, action research transforms teaching.

Research Methods

In this section, information about research participants and methods are presented. Also outlined are the decisions that 16 rural grades K-2 teachers made while carrying out collaborative action research and the support provided by their school districts and the author of this paper, a university facilitator/researcher.

Participants

The five participating school districts were located in northern Ontario. The student population within the participating schools was 20-40% Aboriginal, with a small percentage of these children speaking First Nations languages at home. While three of the school districts offered Aboriginal language and culture courses, there was no instruction in Aboriginal languages. One of the goals of

the collaborative action research initiative was to support Aboriginal students' oral language development. District-wide oral language testing of K-1 students showed that Aboriginal students were approximately 10 months behind in their receptive language in comparison to non-Aboriginal students (Northern Ontario Educational Leaders, 2008).

In September, 2010, district consultants invited 24 primary teachers and school-based literacy coaches, all of whom worked with teachers and students to improve literacy achievement in 12 northern rural schools, to participate in the research and attend a half-day webinar in early October, 2010. Initially, all 24 teachers participated, although four teachers withdrew in January, 2011 and two teachers withdrew in March, 2011. All of the 18 participants who participated until March, and thus were included in group interviews, were female. Only one participant had fewer than six years of teaching experience, and two teachers had 20 or more years of teaching experience. Of the remaining 15 teachers and literacy coaches, nine had been teaching 6-10 years and six had been teaching 11-19 years. All but one teacher had participated in the previous three-year oral language professional development initiative.

Participants were divided into 11 teams, according to the school in which they were teaching, although one team included teachers from two schools because one teacher had moved to another school in September, 2009. One of the initial 11 teams had three teachers as members. Three teams, including one that withdrew later in the project, were composed of two teachers. The rest of the teams had one teacher and one school-based literacy coach working together. Two teams withdrew before January, 2011, and one team withdrew in March, 2011, explaining that they were feeling overwhelmed by the work and time commitments involved.

The data used in this article came from the 16 teachers who worked on eight teams in nine schools who completed the project and the team of two teachers that withdrew in March but agreed to join a group interview. The 16 participants who completed the project were nine kindergarten teachers, two teachers who taught a combined class of grade 1 and 2, and five literacy leaders who did not have a classroom, but instead served as consultants within their schools.

One teacher had already engaged in formal action research projects through the provincial teachers' union. Eight participating teachers and literacy coaches had no previous experience with action research. The remaining seven teachers had taken part in established action research projects funded by the provincial Ministry of Education with released time for monthly meetings, but they did not analyze their data or write reports of their research.

Support for Teachers' Action Research

Participating school districts gave teachers two days of released time from their teaching responsibilities to plan their research, analyze data, and write their research reports. Teachers' action research took place between November, 2010, and May, 2011, supported by 20-30 minute telephone conversations with the university facilitator/researcher in late January and early February, and again in March to talk about the teachers' oral language interventions and the data that they were gathering regarding their students' oral language development.

Helping teachers determine their research focus.

In a half-day webinar on October 4, 2010, for which participants were given released time, the university facilitator/researcher (with a graduate research assistant) introduced the action research initiative to the teachers and provided suggestions for them to develop their action research questions. School districts further supported the teachers' process of determining their action research focus by distributing to each participating school a resource that the university facilitator/researcher recommended, *Speaking and Listening for Preschool through Third Grade* (Resnick & Snow, 2009).

Prior to the October webinar, the university facilitator/researcher suggested to participating teachers a number of potential research themes related to the topic of the school districts' initiative, children's oral language development (see Appendix A). Teachers selected their research topics from the list and modified the questions to suit their classroom contexts. In this way, the research questions started from practical issues identified by teachers as they drew on their professional knowledge of their students' needs (Altrichter et al., 1993; Hughes, 2003). Team members e-mailed the university facilitator/researcher their initial ideas for their research prior to the web meeting. The university facilitator/researcher then provided the teachers and literacy leaders with feedback on their proposed topics. During the webinar, she also gave an overview of goals and practices of action research, talked about some examples from previous action research projects, provided further direction on how to determine research questions, discussed ethical considerations for conducting research, and outlined the kinds of support that teachers would be provided and expectations for their participation (e.g., carrying out the research, completing the survey and scheduling time for the university facilitator/researcher's observations and for a group interview discussion). Teachers and literacy leaders then met in their collaborative groups and further refined their research questions based on feedback from the university facilitator/researcher.

Helping teachers with data analysis and report writing. The university facilitator/researcher visited the

action research teams during the weeks of April 18 and May 2, 2011, to provide instruction on how to analyze their qualitative research data (e.g., student writing and oral language samples, anecdotal observations) and to assist them in writing their research reports. She conducted group interviews during these visits. The team members brought the data that they had collected between October, 2010, and April/May, 2010, and as team members and the university facilitator/researcher discussed the various pieces of the research, she took notes on her laptop, using a template of the research report (see Appendix B). The university facilitator/researcher guided the team members in how they could assess change in students' learning over time through such processes such as counting numbers of words and sentences, identifying numbers of simple and complex sentences in children's utterances and writing, recording children's use of proper nouns and pronouns when retelling a story, and identifying children's understanding of new vocabulary in their talk about a field trip experience.

During a release day in June, team members wrote reports of their teaching practices and research methods and outlined what they had learned about effective teaching practices and students' oral language learning. This released time contributed to teachers' and literacy coaches' professional learning by providing a formal opportunity to reflect on their experiences (Elliott, 2001). They sent drafts of reports they had written using the report template in Appendix B as a framework to the university facilitator/researcher for feedback and then submitted a final report. The research results were disseminated to other teachers via their school districts' websites and through presentations at schools and district professional development meetings.

Data Collection and Analysis

The primary data sources for this study were field notes of classroom observations of teacher instruction that stemmed from their action research (one visit to each of the 11 classroom teachers' classrooms for 20 to 75 minutes), transcripts of group interview discussions conducted during the weeks of April 18 and May 2, 2010, and team reports of their action research. Field notes of classroom observations included information about the teaching materials for the observed lesson; what teachers said and did when working with the whole class, small groups, and individual children; materials on the walls and at centers related to the teachers' action research foci; and the teachers' methods for assessing students' learning from the action research intervention. Group interview questions examined team members' perceptions of their professional learning and their experiences as action researchers. Group interviews were conducted in each team's school following the classroom observations. Interviews, thus, were composed of one,

two, or three team members, depending on the size of the team. E-mail correspondence and the university facilitator/researcher's notes from telephone conversations with teachers provided additional data.

Data were analyzed using constant-comparison analysis (Creswell, 2006) to generate categories and themes regarding changes in teachers' and literacy coaches' knowledge, practices, and attitudes toward supporting their students' oral language development and toward action research. Categories were initially identified in data gathered from each team and then compared and contrasted across sites to generate themes. The results of this analysis are discussed in the following section, beginning with a description of participating teams' action research methods and findings, followed by their perceptions of what they have learned through action research and views and recommendations for enhancing the professional learning potential of action research.

Results

Participants' Action Research: New Teaching Practices, Data Collection, and Analysis

Underpinning teachers' action research projects was extant literature that showed the significant contributions of classroom talk to literacy development (e.g., Boyd & Galda, 2010; Cazden, 2001; Hynds & Rubin, 1990; Resnick & Snow, 2009). By providing opportunities for students to talk for extended periods of time, teachers support students' development of "*linguistic competence*, or knowledge of sounds, meaning, and syntax or word order, as well as *communicative competence*, or the understanding of how to use language to communicate" (Boyd & Galda, 2010, p. 4).

Many of the participating teachers' new teaching approaches addressed particular oral language difficulties that they observed in their daily interactions with their students, particularly the Aboriginal students who did not speak much English at home. They found that little research has been conducted in remote Aboriginal communities on children's language development (Wigglesworth & Simpson, 2008) and drew on the general research on English language learners when designing their teaching interventions for their action research projects (e.g., August, Carlo, Dressler, & Snow, 2005; Páez, Paratore Bock, & Pizzo, 2011; Uccelli & Páez, 2007). Table 1 details each team's research questions, new teaching practices, and data collection and analysis methods. All action research teams chose three or four focus students (usually a mix of girls and boys) who showed limited oral language development at the beginning of their research. For the most part, teachers' new practices involved the shared reading and chanting/singing

of nursery rhymes, poems, and songs or the development of students' vocabulary through field trips and concrete activities. One team introduced oral language practices that supported students' writing, and another team initiated a sharing chair activity in which students talked about their understanding of mathematics.

New Practices and Students' Learning: Teachers' Observations

A number of participants reported that their action research made them aware of the need to provide opportunities for students to talk and to develop their background experiences to learn the vocabulary that would allow them to express themselves in a wide range of contexts. One teacher reflected that her action research confirmed her understanding about "how much we need to fill students' backpacks with the sound of language, the rhythm of language. We need to build all that before we can expect students to make new vocabulary their own." Her team's data analysis showed that "some students dance around the word. They're talking about the vocabulary but not able to tell us what it really means."

Teachers and literacy coaches said that they were very satisfied with the outcomes of their interventions in terms of student oral language learning. Many teachers provided anecdotal evidence of positive results of their new practices. One teacher, for example, explained, "For the first time ever, my children who scored low in the Oral Language Assessment¹ are probably the chattiest kids in my room. They *like* to talk." Another teacher observed that "the little boy who came into kindergarten with two words is now speaking in sentences and he can articulate what his needs are and participate." A third teacher provided an example of a kindergarten student who brought his learning about nursery rhymes home to teach his younger sister over a weekend and talked about the experience at school on Monday, motivating peers to do the same with their younger siblings. Participants also noticed, as expressed by one teacher, "a difference in confidence, number one, and in students' willingness to speak" and observed that the oral language project led to growth in writing, as well as in oral language.

Most of the students who were tracked by participating teachers and literacy coaches improved on a number of indicators: the numbers of words and sentences spoken and their use of precise words when talking to peers and to their teachers, their willingness to engage in whole-class conversations, their demonstration of their mathematics learning, the quantity of words, sentences and strong (specific) words used in their writing, their Oral Language Assessment scores (Crevola, 2008), and their performance on

¹ Developed by Crevola (2008).

Table 1
Teachers' Research Questions, New Teaching Practices, and Data Collection and Analysis

Grade	Research Questions	New Teaching Practices	Data Sources	Data Analysis
Kindergarten	<p>How does participating in the shared reading of poems/nursery rhymes/chants/songs/stories on a daily basis influence students' oral retellings of familiar stories and writing of their own stories in terms of:</p> <ul style="list-style-type: none"> • Increasing their use of more precise words when they speak • Improving the grammatical structure of their speech • Increasing their length of utterance in their talk? 	<p>Poems and songs were chosen to establish classroom routines and to facilitate transitions. Students chanted/sang the poems in class with the teacher and then read the poems from their own poem books at the daily poetry centre or during free-choice reading times.</p>	<p>Oral retelling of a story</p> <p>Anecdotal observations</p>	<p>Number of simple and compound sentences, number of words, use of regular past tense verbs, number of details and sequence of details</p> <p>Examples of precise words and use of regular past tense verbs in everyday speech</p>
Kindergarten	<ol style="list-style-type: none"> 1. How does chanting and doing actions to nursery rhymes influence students' abilities to provide rhyming words for given words? 2. How does playing with nursery rhymes influence students' participation in oral language activities? 	<p>Five nursery rhymes were read and students and teacher did accompanying actions at the beginning of every day. Teacher informed students about cultural origins of the nursery rhymes.</p>	<p>Anecdotal observations</p>	<p>Students' demonstration of interest and engagement in the class nursery rhyme activities (e.g., mouthing/saying the words, providing rhyming words when teacher prompts; raising hands to answer questions/give opinions)</p>
Kindergarten	<ol style="list-style-type: none"> 1. How does students' participation change over time when engaged in chanting poems and nursery rhymes as a class? 	<p>The whole class chanted nursery rhymes, poems, and chants at the beginning of each day</p>	<p>Anecdotal observations</p>	<p>Students' demonstration of interest and engagement in the class nursery rhyme activities (e.g., mouthing/saying the words, providing rhyming words when teacher prompts; raising hands to answer questions/give opinions)</p>
Kindergarten	<ol style="list-style-type: none"> 1. How do field trips and hands-on activities geared toward the kindergarten curriculum influence students' use of specific vocabulary when asked to tell as much as they can about the topic? 2. How does students' performance on the OLA change over the course of the project? 	<p>Teachers took students on field trips and brought in concrete objects and photographs to introduce vocabulary and concepts. Field trip destinations included communities' museums, post office, and local businesses; concrete activities included cooking, science experiments, and building structures.</p>	<p>Students' drawings and their response to the prompt, "Tell me as much as you can about..."</p> <p>Oral Language Assessment</p>	<p>Identified number of specific words students used when describing their drawings and telling the teacher about the curriculum topic before and after participating in the field trips and concrete activities</p> <p>Number of sentences correctly repeated on the OLA</p>

Table 1 (continued)
Teachers' Research Questions, New Teaching Practices, and Data Collection and Analysis

Grade	Research Questions	New Teaching Practices	Data Sources	Data Analysis
Kindergarten	How does pre-teaching and the follow-up that goes with cross-curricular field trips influence children's use of specific vocabulary showing their understanding of the concepts when they tell an older student about the field trip?	Kindergarten students were interviewed by high school students—asked to tell them how to cook a turkey and describe what they did on Finesse Fitness Fridays after participating in two field trips.	Kindergarten students' tape recorded conversations with the high school students	The teacher determined whether the vocabulary used in students' conversations showed limited, some, considerable or thorough understanding of the topic
Kindergarten and Grade 1	How does discussion prior to writing and feedback from peers and teacher influence the number of words and sentences in students' writing and their use of precise words?	Teacher read aloud a non-fiction text, and invited students to generate topic specific word lists (powerful word list) with the class. She modeled writing using the powerful word list, and asked students in small groups to write a sentence using a place mat where students can see each other's sentences and help each other with their writing. Students and teacher generated success criteria and peers gave feedback on each other's sentences written in the place mat activity, culminating in independent writing and teacher feedback in student-teacher conferences.	Students' writing samples prior to initiating the intervention, at mid point and at end of intervention (this team chose all students—12 boys and 8 girls—as their research participants)	Counted number of words, sentences and powerful words in the writing samples
Kindergarten	How do students' scores on the Oral Language Assessment and their willingness to talk about mathematics change over the year as students participate in weekly sharing chairs to talk about math concepts?	Teachers implemented weekly "sharing chair," where students explained the ways they solved math problems, as an opportunity to "clear up any misconceptions and address them," as one of the teachers said.	OLA Anecdotal observations	Number of sentences correctly repeated on the OLA Identified frequency of students' participation in whole-class discussions, their use of precise mathematical language in the sharing chair activities, and evidence of accuracy in their mathematical understandings

tests conducted by all grades K-1 teachers in the participating districts in September and June since the beginning of the previous initiative. They also noted the improvement of students' scores on standardized literacy tests, their ability to define vocabulary, and their willingness to provide details

when talking and drawing pictures about field trips. Table 2 details the teams' results. It is not possible to assert clear causal relationships between students' demonstrations of their learning and the new teaching approach because comparison groups were not used, and the new approach

Table 2
Teachers' Findings from Their Action Research

Grade	Research Questions	Research Results
Kindergarten	How does participating in the shared reading of poems/nursery rhymes/chants/songs/stories on a daily basis influence students' oral retellings of familiar stories and writing of their own stories in terms of: <ul style="list-style-type: none"> Increasing their use of more precise words when they speak Improving the grammatical structure of their speech Increasing their length of utterance in their talk? 	The oral retelling in April included more details, a distinct beginning and end that was not present in the January retelling Double the number of words in April retelling Names of characters were given, as opposed to pronouns to refer to characters in the January retelling All sentences were grammatically correct in April and one was correct in January. Average length of sentences changed from 6.7 words to 10.7 words
Kindergarten	1. How does chanting and doing actions to nursery rhymes influence students' abilities to provide rhyming words for given words? 2. How does playing with nursery rhymes influence students' participation in oral language activities?	Participating students provided rhymes and participated in nursery rhyme chanting and games more frequently in April than in January.
Kindergarten	How does students' participation change over time when engaged in chanting poems and nursery rhymes as a class?	Focus students participated in whole-class chanting of poems and rhymes 40% of the time in October-December observations and 60% of the time in March and April observations.
Kindergarten	How do field trips and hands-on activities geared toward the kindergarten curriculum influence students' use of specific vocabulary when asked to tell as much as they can about the topic?	Before the field trips, focus students used specific vocabulary and showed accurate understanding of the vocabulary from 25% to 66% of the time in their responses to the prompts. After the field trips, these students used specific vocabulary 50% to 80% of the time.
Kindergarten	How does pre-teaching and the follow-up that goes with cross-curricular field trips influence children's use of specific vocabulary showing their understanding of the concepts when they tell an older student about the field trip?	In December, two students used general vocabulary that showed some understanding of the concepts, and two students used specific vocabulary showing considerable understanding. In May, all four students used specific vocabulary showing considerable understanding.
Kindergarten and Grade 1	How does discussion prior to writing and feedback from peers and teacher influence the number of words and sentences in students' writing samples in response to a prompt and their use of precise words?	Students used an average of 8.25 words in their October writing samples and 97.3 words in their May samples. They wrote an average of 1.5 sentences in October and 10.3 sentences in May. Students used an average of .65 precise words in October and 8.58 words in May writing samples.
Kindergarten	How do students' scores on the Oral Language Assessment and their willingness to talk about mathematics change over the year as students participate in weekly sharing chairs to talk about math concepts?	The average OLA score for the six focus students was 7.3 in September and 9.7 in May.

was not the only one used by teachers over the course of their action research. However, this teacher and others participating in the action research said that they were encouraged by the results of their research and intended to continue using the new approaches in the future.

Participants' Perceptions of their Professional Learning

In group interview discussions, participants described what they had learned about effective teaching methods to support their students' oral language, reading, and writing development. They explained that because action research requires focused, systematic collection and analysis of data, it helped them to develop their assessment knowledge and skills. As one teacher explained, the action research had helped all participants to gain "a better picture of our students—more so than we would have without this project." Teachers found that the analysis skills learned through working with an experienced researcher readily transferred into their other assessment responsibilities. One teacher valued "seeing the data, seeing the results, and then being able to examine your own teaching and think about what you're going to do differently to meet those needs even better." Another teacher said that she had gained a better understanding of "the complexity of what I'm looking for in my students. So yes, they're doing well, but also I can say that they're talking in simple sentences and the complex thoughts are there, etc." Working with the university facilitator/researcher in data analysis helped her to understand the "specifics of oral language development."

One teacher said that she found the experience "very very valuable, and I'll continue that. I feel that maybe in the past ... I wasn't recording responses enough. I was hoping that students were getting it, but now there's actual documentation." A literacy coach confirmed, "I think that I see a bigger benefit in observing the children than I ever did before.... Now I take really detailed notes." In addition to using commercially produced or standardized tests, teachers and literacy coaches had either designed new assessment tools or had adapted existing ones to make them more useful to their particular needs. The importance of finding ways to gather evidence of students' learning that would address the action research questions was underscored by the teachers who withdrew from the project. Specifically, they were not able to find viable ways to track their students' learning. As the year progressed, participants felt that they were getting further and further behind because they had not gathered appropriate or sufficient data.

Furthermore, participants who were involved in another Ministry of Education-initiated inquiry project agreed with one literacy coach who said that "other people may have done the final report thinking that they're helping the teacher, but at the same time, learning how to analyze

the data is a big learning experience, too." Team members felt a greater sense of ownership over their research and their professional learning when they were involved in data analysis and report writing. A literacy coach expressed this feeling in this way: "It becomes *our* research project, whereas with the other inquiry project, we didn't really feel that we were learning." Similarly, a teacher stated, "I think the report is going to be very authentic because it's *us* who did the work on it."

Teachers' Views of the Contributions of Action Research to Their Learning

All participating teachers felt that their involvement in action research had been a worthwhile professional learning experience. One teacher summarized the benefits identified by most participating teachers:

It is honestly a great way to learn for teachers. For me, this has been the best professional development of my entire teaching career, and I've been teaching for 20 years. I can sit in a room and listen to a speaker for an hour. I can get some things out of it, but not nearly as much as I get out of working with my colleagues, working with my kids, and taking something right into the classroom and trying it.

The benefits included moving their professional knowledge from intuitive to evidence-based understandings and having the opportunity to consolidate and extend their learning from the previous three-year initiative. One teacher reflected,

It's making me be more mindful of those things that I do. Sometimes you have a gut feeling as a teacher that this is working, but when you're doing research, you have to be much more careful and follow more closely your results.... It causes me to think a little deeper and a little broader, giving me a broader picture of things.

The teachers and literacy coaches, almost all of whom had participated in the previous three-year initiative, felt that their action research experience reinforced and extended what they had learned about developing their students' oral language. One teacher assessed the initial three-year phase of the oral language project as "a good stepping stone; getting us to think about oral language and how important oral language is." The action research project then allowed them to "think a little more deeply about our practice, so we're not just working on strategies." One literacy coach observed, "It was a good way of seeing how we could dig

even deeper into what we've been doing in the initial phase of this project." A teacher said that through participation in action research, "the district's message about oral language has finally gotten across." This overwhelmingly positive evidence of teachers' and literacy coaches' satisfaction with their learning matches that reported in prior research examining the effect of collaborative, teacher-directed action research on teachers' professional growth (Furlong & Salisbury, 2005).

The evidence suggests the action research initiative was successful in extending and refining what a small group of teachers had learned in the previous three years of the oral language initiative. The teachers reported becoming more confident in their ability to develop their students' phonemic awareness and assess students' oral language development. They created assessment tools and adopted more systematic ways to analyze oral language and literacy assessment data. Importantly, the participants believed that their action research projects had an impact on their students' learning, based on their analysis of assessment information. Teachers and literacy coaches found the "ongoing cycle of questions that promote deep team learning" in action research has great potential to affect student achievement directly (DuFour, 2004, p. 9).

Features of Action Research Contributing to Teachers' Learning

Participants identified the inherent professional autonomy, together with opportunities to reflect and collaborate with colleagues and the university facilitator/researcher, as influential to their professional learning during this project. Teachers' perceptions of these benefits are outlined below.

Professional autonomy and opportunities for reflection with colleagues. The appeal of action research for 14 of the participating teachers and literacy coaches was the opportunity to focus their learning in an area of interest to them. The notion of professional growth and improvement of practice that was tailored to individual teachers' classroom contexts was exciting and motivating to them. A literacy coach said,

I liked that we had our own control. We were involved with [the speaker in the first three years of the project], but it was such a large project that there wasn't any room to try the things that you wanted. I mean, there were strategies and this is what you were going to try and then see what happened. But with this action research, it was exciting to see—we weren't sure what the end would be. We could use our own professional

knowledge. We could work out what we wanted to do.

In addition, one teacher remarked, "It's a good method for finding something you're passionate about and getting teachers to dig deeper into a subject using their data."

Participants contrasted the action research professional learning experience with traditional delivery of professional development, as expressed by one teacher: "With this, we're doing it. We're learning because we're up to our eyeballs in it, as opposed to all the years we sat in front of a teleconference board listening to someone somewhere talk about whatever. You walk out of there and ask, 'What did they say?'" A literacy coach agreed that "this is a more valuable way of learning than professional learning communities or critical pathways that we do as a school because it is teacher driven and you can focus on one thing." Collaboration was "key," as explained by one teacher, to the success of teachers' action research. Two other teachers agreed that they preferred learning from and with each other as they worked on their action research, rather than watching videos on particular teaching practices. A literacy coach changed her views of action research from believing that her research would "have to fit within this mould, within a box. But now it's, 'Oh no, you're outside of the box. You created the box.'"

Teachers also identified action research's opportunities for focused reflection as helpful to their learning. As one teacher explained,

A lot of the things that we have looked at lead me to do a lot of searching of my own. . . . What am I doing? What can I do better? And lots of self-reflecting. It really helps to put into focus what you're teaching and why you're teaching it and what the importance of it is.

Another teacher commented on the ways in which action research bridges theory and practice: "You learn all these different theories behind teaching, and you have to see what works for you, but by doing an action research project, you actually see the result, that it really works because you're looking at data."

Opportunity to contribute to the field. Participants were committed to completing their action research projects because they knew that their work would have an impact on their field. Specifically, their work would counterbalance the skewing of literacy research toward urban sites and subjects (see, e.g., Donehower, Hogg, & Schell, 2007). Participating teachers and others accessing the website now have published examples of research conducted in rural settings. The act of publishing research conducted in

rural settings begins to build a body of evidence of rural children's literacy learning in response to particular teaching practices. The development of this body of rural research disrupts much of the extant research on literacy learning, which assumes that the results of research conducted in urban settings can readily "account for the experiences and realities of rural places and peoples" (Donehower, Hogg, & Schell, 2007, p. 12).

One teacher's views of her contributions to professional knowledge changed as a result of participating in the action research project. She felt empowered to create, rather than implement, what others consider to be good practice, explaining:

You always feel that research is for really smart people who do the research and tell us what we need to do as practitioners.... Wow, you're actually going to be someone that could be potentially having an impact on practice and would be of value to other teachers.

Another aspect of renewed professionalism was the realization that reliable and valid data could come from assessments that the teachers designed. That is, they did not have to rely on published formal assessments. Many of the teams were discouraged as they sought standardized oral language diagnostic tools and protocols on the Internet and from other sources in the initial stages of their research. The tools did not provide the types of information they needed for their research studies. One teacher said, "We were worried about collecting oral data. What does that look like?" When the university facilitator/researcher told them they could create their own and offered suggestions for the types of items that they could include on the assessments, teachers readily created their own tools, coming to the realization, as one teacher exclaimed, "Hey, we can do this!" In addition, the majority of participating teachers and literacy coaches expressed enthusiasm at the suggestion that they might present their action research to colleagues at their schools, to other teachers in their districts, or at literacy conferences.

Shortcomings of Collaborative Action Research

Like teachers in previous action research studies, participating teachers found that the amount of time required to carry out collaborative action research was a significant barrier to successful completion of their projects (Goodnough, 2001; Peterson et al., 2010). The eight teachers who withdrew from the action research study did so because they were not able to fit into their work days the collaborative meetings and additional time needed to plan and systematically gather evidence of the influence of a new teaching practice. One teacher cautioned, "It takes a special

person to want to do the active work of action research. I'm thinking, 'Big work load here.' Teachers should be aware of the time it is going to take."

It appears that the collaborative aspect of action research, identified by many participants as one of its rewarding features, also presented challenges to the success of their action research. Specifically, collaboration was viewed as its most time-consuming aspect. One teacher explained that "it does take a lot of planning when you do work with a team, so if you want collaboration, then you have to give the time." Another teacher on this team said, "We would set a date to meet..., and then it got changed. And then it got changed again." They were dismayed that even working in close proximity did not provide opportunities for informal discussion about their research. Other teams, however found that teaching in neighboring classrooms allowed for "random popping into each other's rooms" to talk about their action research.

Teachers identified a tension between valuing the time spent on action research and being willing to take time away from other activities in their professional and personal lives. As one teacher observed, "Everybody is interested in changing their teaching, but if it comes along with this much time, I don't know how many people would jump at it and say, 'Sure, I'll do that.' Even though it is absolutely and totally worthwhile." In addition, many participating teachers were involved in other school board initiatives and found it difficult to balance their various commitments. Some were able to integrate the initiatives, but others found it difficult to devote time and energy to two different projects. The challenge of finding time for action research is addressed in the following section, with recommendations for rural school and school district administrators.

Making Action Research Work in Rural Schools: Overcoming the Shortcomings

Given that collaboration with colleagues was a highly influential feature of participants' success in conducting action research and developing their professional learning, rural administrators should ensure that collaboration is built into action research initiatives. They should build on the well-established relationships among teachers that are often found in small schools so that teachers who know and trust each other are working together (Chance & Segura, 2009). Providing three or four days of released time for teachers to visit each other's classrooms and to meet to plan, analyze data, and write reports would facilitate the collaboration. However, the number of released days would need to be balanced with teacher concerns about being away from their students and the potential negative impact on student learning that their absence would cause. Participating teachers suggested that some district-wide professional

days could be devoted to action research meetings to limit the need for supply teachers. In addition, as suggested by a participant, principals could offer to take a teacher's class for an hour so that an action research team could meet. This practice would reduce the time that teachers spend away from their classrooms and provide time for collaboration on the research. Pairing a teacher and a literacy coach would provide opportunities for mentoring within the teams and would also facilitate the research process. For example, participating teachers found it helpful to have other teachers in their classrooms to assist in the data collection.

Participation in action research should be voluntary, especially in small, rural schools where teaching personnel have a wide range of teaching and administrative responsibilities. In addition, action research topics should be related to programs already in place so that teachers can readily incorporate the experience into their work. Rural administrators might also consider using action research as a follow-up to traditional professional development. In this study, action research helped teachers and literacy coaches to refine and consolidate what they had learned in the more traditional professional development activities that preceded the action research phase. They were able to draw upon this knowledge and experience to determine a research focus, new teaching practices, and methods for assessing the efficacy of the practices.

In summary, teacher-directed, collaborative action research helps teachers to respond to the challenge posed by Edmondson and Butler (2010) to consider how rural teachers can "gain control over the meanings and policies that direct their lives" (p. 170). The experience and intuition of educators, together with systematically gathered evidence, inform their practice. Rural administrators initiating action research projects will need to consider ways to support teachers so that they are able to sustain their research from planning stage through data analysis through report writing. By following the principles of encouraging teacher autonomy, providing opportunities for collaboration and reflection, and offering support for data collection and analysis, other rural school districts may find that action research professional development initiatives work well to support the professional learning of rural teachers in their schools. In the process, teachers will be generating new knowledge grounded in specific rural contexts that can be adapted to other classrooms.

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Appendix A

Oral Language Project: Some Possible Topics for Your Action Research

(Drawn from Resnick & Snow, 2009.)

1. How does bringing in storytelling/structured play centers/field trips (could choose one or more of these) that support curriculum topics geared toward introducing new vocabulary to students in context influence students' vocabulary development and performance on various oral language assessments?
2. How does reading (and perhaps writing) poems/nursery rhymes/chants/songs on a daily basis influence students' vocabulary development and performance on various oral language assessments, including phonemic awareness tests?
3. How does structured time for following students' curiosity (see p. 7) influence students' vocabulary development and performance on various oral language assessments? (e.g., students could observe a phenomenon such as meal worms pupating and becoming beetles, record what they observe orally in a tape recorder or using pictures and writing, and then create an oral report—it could be audio- or video-taped).
4. How does involving students in word games, including the use of drama and structured play, influence students' vocabulary development?
5. How does talking about non-fiction books with partners or with the teacher influence students' knowledge of the curriculum topics and performance on various oral language assessments?
6. How does involvement in telling stories to adults (e.g., seniors from a local seniors' centre) or children from another grade influence students' performance on various oral language assessments?
7. How does word play associated with physical activity influence students' vocabulary development and performance on various oral language assessments?
8. How does instruction in listening to and retelling stories influence students' retelling abilities and their performance on various oral language assessments?
9. How does dramatizing various social situations (could use puppets, as well) influence students' abilities to interact according to social rules?

Research that Observes Students' Oral Language and Teachers' Interactions with Students (these research projects would involve tape recording/video recording students and teachers and analyzing the types of talk as a starting point for planning instruction)

10. How do _____ (names of focus students) discuss books? (see p. 97 or p. 156 for possible checklist) What are the patterns in how students discuss books? What are the implications for my teaching?
11. What kinds of questions do I ask students when they talk about their writing/about books/about events/about concrete objects/about something they have learned?

Appendix B

Template for Teachers' Action Research Reports

Project Title

Research Team Members

School District

Research Purpose (What did you want to learn and why is it important to you?)

Research Question(s)

New Teaching Practices

Research Methods (Talk about the data you gathered and what you did to analyze it.)

Results (What did your data tell you? How would you answer your research questions?)

What Other Teachers Can Take from this Research (Implications for classroom practice)

Appendix C**Group Interview Questions**

1. What drew you to participating in the literacy action research project supporting students' oral language? What experiences did you already have with action research?
2. What were you expecting when you started the action research supporting oral language project and how well have your expectations been met?
3. What is your overall assessment of the action research supporting oral language action research experience?
4. Which aspects of the action research supporting oral language project were most helpful for your learning?
5. What challenges did you experience during the project? What could have been done to make the experience a better learning experience for you?
6. How was your team put together? Have you collaborated with members of your team on other projects? Describe how decisions were made in your team.
7. How has your understanding of oral language development changed? What factors influenced your shifts in understanding?
8. Has your teaching changed? How? What factors have influenced your shifts in teaching?
9. How would you explain what action research is to another teacher interested in participating in an action research project?
10. What recommendations do you have for any future projects such as this one that your school board might initiate?