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Year One of School Improvement: Examples from Nine Schools

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School improvement research asks the question "How do schools improve over time?"[2] and thus is focused on school culture and the change process.[3] A growing body of research has identified characteristics of improving schools, including democratic leadership, consideration of school context and culture, shared vision, external and internal support, a focus on teaching and learning, ongoing professional development, dialogue, collaboration, collective inquiry, and data-based feedback on improvement efforts.[4]

In many schools across the nation, schoolwide action research has become the primary vehicle for integrating the various aspects of school improvement.[5] Unlike many popular school improvement models that require participating schools to accept particular assumptions, goals, and practices, action research allows the school to set its own improvement goals and design its own improvement plan based on identified needs. School improvement and schoolwide action research merge when administrators and teachers– and often parents and other community members as well– agree upon a focus for school improvement, gather data on the focus area, set data-based school improvement goals, develop a collaborative action plan for meeting those goals, and gather evaluation data in order to measure progress and revise the action plan.[6] In doing so, as Allen and Calhoun noted: "...action research places disciplined inquiry (i.e. research) in the context of focused efforts to improve the quality of the school and its performance."[7]

The use of action research as a vehicle for developing the capacity of schools to deal with change is not new. Sixty years ago, Lewin wrote about the power of action research to transform "...a multitude of unrelated individuals...into cooperative teams...to apply honest fact finding, and to work together to overcome (difficulties)."[8] A number of universities have sponsored various forms of university-school partnerships to support schools in action research endeavors. Allen and Calhoun reported results from a six year study of a group of 100 schools in Georgia and 11 in Iowa that had made a commitment to conducting schoolwide action research. As a result of this study, Allen and Calhoun stated that while action research in schools is difficult and complex, it can provide the focus and direction to make change happen. Based on their findings, they recommended the following as important to sustaining improvement efforts:

- Substantial, ongoing opportunities for group vision building and reflection on progress;
- Actions taken need to improve the culture of the school as a whole and should not be viewed as separate from the mainstream life of the school;
- Schools need support around the issue of time, specifically, time to plan, time to implement, and time to see results;
- Schools ideally would interact and exchange ideas with other schools involved in similar processes;
- Ongoing technical assistance when teachers need information to find solutions.[9]

A contrasting study by Peters involving 14 universities and 100 schools across Australia conducted over the final eighteen months of the project found that while teachers reported growth in their understandings about teaching, learning, and change, and showed elevated self-esteem from working on the project, they were limited in their ability to make change beyond the domain of individuals or clusters of classrooms. The teachers in Peters' study saw the most significant outcome at the school level to be greater involvement of staff in professional development and recognition by administration of the need for teachers to have time for reflection. Peters' data suggested that the lack of schoolwide change was a result of involvement by small groups rather than the whole school; resistance built into the school culture; staff turnover; and the loss of critical leaders. Similar to many of the findings in Allen and Calhoun, Peters discussed the need for time and reflection, structures for shared learning, clear strategies for evaluation and feedback on process, and, importantly, clarity about expectations and what constitutes results to support a sense of achievement in the process.[10]

Our study described the first-year progress of an action research-based school-university partnership called the School Improvement Network where nine schools from different areas of central Texas worked with university facilitators to set goals and develop plans based on an action research sequence. Each school had a unique context in terms of location, population, size, and needs. A number of the schools had new principals and saw this effort as a way to get to know one another; other schools were seeking a different way of thinking and doing around the issues of capacity development and problem-solving. Consistent with the recommendation made by Allen and Calhoun, the School Improvement Network made a conscious effort to build in time to develop group vision, work, reflect, and share across groups, as well as seek out technical assistance.

The School Improvement Network

The School Improvement Network is a school-university partnership sponsored by the National Center for School Improvement (NCSI). The Network includes Texas State University and K-12 schools from throughout Central Texas. The Network is based on four principles:

- School improvement is continuous renewal, not a single reform or event;
- Inquiry as habit of mind is essential to school improvement, and it includes questioning current practices and seeking data-based ideas about improvement to be made;
- Collaborative vision building, curriculum development, professional development, and action research are core strategies for improving schools;

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- All individuals in the school organization need to learn, teach, and lead. Formal leaders must be facilitators able to stimulate and develop the abilities of educators, parents, and students.

Each Network school appoints a school leadership team consisting of the principal, three teachers, and a member of the school community. The leadership team is responsible for facilitating the involvement of the entire school community in long-term action research focused on whole-school improvement. The leadership teams come together periodically for university workshops that include training in data gathering, planning, and facilitating professional development. The workshops also provide teams with time away from their hectic school lives to reflect, plan, and assess their school improvement projects. Finally, the workshops allow teams from different schools to share information, successes, problems, and solutions.

In the first year of Network membership, each school is charged with selecting a focus area for school improvement, gathering data to better understand the focus area, and designing a data-based action plan for school improvement. The action plan format calls for school improvement objectives, improvement activities, and a plan for gathering data to assess the progress of the action research. At the end of the first school year, each school is asked to assess its progress toward meeting improvement objectives and develop a revised action plan to be implemented the following school year.

Throughout the action research process, critical friends appointed by NCSI visit each Network school to provide on-site assistance. Critical friends are professors or practitioners with expertise in the school's focus area. Additionally, students from Texas State's graduate programs in educational administration and school improvement are available to assist the schools with literature reviews, data gathering, and data analysis. Finally, NCSI provides Network schools with small grants to help cover expenses for released time, professional development, and the purchase of curriculum and instructional materials.

This study reports on the process and outcomes of schoolwide action research by nine schools in their first year as Network members. The participants were a blend of urban, suburban, small town, and rural schools in Central Texas. The participants included three high schools, one middle school, and five elementary schools. Five of the schools either met or were within a few percentage points of meeting Title I requirements for designation as disadvantaged schools. One of the high schools and two of the elementary schools were in their first year of operation.

Purpose of the Study

The study consisted of separate case studies of the first year, or start-up phase, of the nine schools' long-term action research projects, as well as a cross-case comparison of school improvement efforts. This article reports on the cross-case comparison. Focal points of the case studies and cross-case comparison included: (a) how the schools organized for action research; (b) the role of data gathering and analysis; (c) the schools' action plans; (d) early implementation; (e) level of involvement and collaboration by members of the school community; (f) the School Improvement Network's role in facilitating action research; (g) leadership during the action research; and (h) early effects on the schools, educators, and students.

Research Methods

Data gathering included interviews with school administrators, teachers, and critical friends. Interview questions were open-ended and paralleled the study's focal points. Participants also completed a survey including 23 fixed-response items with Likert-type scales and four open-ended items. (See Appendix.) The quantitative part of the survey included sets of questions on collaboration, planning, implementation, assistance from NCSI, and effects of the action research. Open-ended questions asked participants about challenges, positive experiences, learning, and change during the action research. Additional data gathering methods consisted of field observations; development of school action research profiles based on participant self-ratings on an action research rubric; and collection of archival data, including school demographic data, student achievement data, action plans, program evaluation data, and year-end action research reports. (See Figure 1.)

Interview transcripts were coded using the constant comparison method. A series of data displays were developed, summarizing interview data for each of the study's seven focal points. These data displays allowed us to compare perceptions of administrators, teachers, and critical friends within each school as well as to compare perceptions of leadership teams across the nine schools. Review of data displays helped to identify common themes, sub-themes, and outlying perceptions within and across the teams. A similar process was used to compare responses to open-ended survey questions.

A review of the qualitative data discussed above led to tentative identification of two types of schools in terms of their first-year of action research: "Starters" and "Wheel Spinners." Quantitative survey responses and participant ratings on action research rubrics were used as a check on tentative conclusions. Independent group t-tests were conducted on survey responses of educators from schools classified as Starters and Wheel Spinners. Also, rubric ratings from the two types of schools were averaged to allow comparison of composite profiles of Starters and Wheel Spinners. Field notes and archival data gathered during visits to the nine schools were reviewed to provide additional context and verification of results.

Results

A significant result was the identification of two types of schools in the start-up phase of action research. Starters were schools that had more involvement and collaboration in action research among teachers outside the leadership teams, were effectively implementing their action plans by the end of the first year, took advantage of their critical friends' offers of assistance, and experienced more positive effects by the end of the first year. Wheel Spinners had less participation and collaboration, had more difficulty getting organized, gathered fewer types of data, had difficulty implementing their action plans, and did not report as many positive effects as the Starters. Six of the participating schools were classified as Starters and three as Wheel Spinners. We report results here under headings corresponding to the study's eight focal points. Common results as well as differences between Starters and Wheel Spinners are described under each heading.

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Figure 1
Schoolwide Action Research Rubric

	Stage 1	*Stage 2*	*Stage 3*	*Stage 4*
Focus Area	Participants are unable to agree on a focus area or have agreed on several unconnected foci.	The principal and the leadership team have agreed on a focus area, but other members of the school community have not committed to the focus area.	The principal, leadership team, and a substantial part of the school community have agreed upon a focus area.	All or most of the school community has agreed upon a focus area.
Needs Assessment Data	No needs assessment data have been gathered, or no data analysis has occurred.	Some needs assessment data have been gathered, but either the data or the data analysis is insufficient.	Adequate but not extensive data have been gathered, and data analysis has been adequate.	Data gathering has been varied and extensive, and data analysis has been extensive and deep.
Planning	No written objectives, action plan, or evaluation plan is in evidence.	Written objectives are in evidence, but no written action plan or written evaluation plan is in evidence.	Written objectives and a written action plan are in evidence, but no written evaluation plan is in evidence.	Written objectives, a written action plan, and a written evaluation plan are in evidence.
Implementation	No meaningful implementation has taken place.	Initial stages of the action plan are being/have been implemented.	Several components of the action plan are being/have been implemented.	Most or all components of the action plan are being/have been implemented.
Program Evaluation and Revision	No evaluation data have been gathered or data have not been analyzed.	Some evaluation data have been gathered, and some data analysis has taken place, but the evaluation process is not being used to improve the program.	Satisfactory data gathering and analysis have taken place, and the evaluation process is being used to some extent to improve the program.	Extansive data gathering and analysis have taken place, and the evaluation process is a major factor in continuous program improvement.
Collaboration	Little or no collaboration on the action research is taking place.	The principal and the remainder of leadership team are collaborating with each other, but the remainder of the faculty is not collaborating on the action research.	The principal, leadership team, and a substantial part of the school community are collaborating on the action research.	All or most of the school community is collaborating on the action research.
Effects	Little or no positive effects on school culture, teachers, or students.	Emerging positive effects on school culture, teachers, and/or students.	Moderately strong positive effects on school culture, teachers, and/or students.	Very strong positive effects on school culture, teachers, and/or students.

Getting Organized

The first step in the action research process is to select a focus area. Focus areas chosen by the schools included the following:

- Establish a balanced approach to literacy instruction across the content areas;
- Improve student attendance and academic progress;
- Improve reading comprehension;
- Improve balanced literature instruction in all grade levels through the use of peer coaching;
- Improve communication and collegiality among all members of the school community (parents, students, staff, administration, and community);
- Improve reading comprehension, particularly of nonfiction reading;
- Improve reading and writing skills in all content areas;
- Improve organizational culture and climate;
- Create an accelerated block schedule and create a new instructional program for repeating ninth graders.

The leadership team, including the principal, at one of the Starters identified the focus areas on its own, and the remaining five Starters gathered input from other members of the school community and invited the school community to participate in selecting the focus area. The Starters used a variety of strategies to choose their focus areas. These strategies varied form school to school, and included whole-school and small-group discussions, study groups, faculty surveys, nominal group technique, examination of student academic and student discipline data, and review of district initiatives and campus improvement plans. A teacher from a Starter described the process for encouraging participation in selecting a focus area:

> We did that through grade-level meetings, working in vertical teams, starting to share concerns in small groups, then we would address the faculty as a whole, then break back down into small groups for clarification, and then back as a whole group...I think through our process the teachers have felt more of an ownership of where we're going and what we're doing...we felt that we really needed everyone on board.

In two of the Wheel Spinners, the principal chose the focus area, and in the third Wheel Spinner, the leadership team chose the focus area without input from the larger school community. Two of the three Wheel Spinners eventually chose a completely different focus area than their original one. The Wheel Spinners' reason for choosing the focus area in all three cases was student academic need, as indicated by student performance data. The composite Focus Area profiles, based on the means of participant ratings on the Schoolwide Action Research Rubric, and displayed on the Action Research Profiles, show the Starters at level 3.6 and the Wheel Spinners at Level 3.1. (See Figure 2.)

One of the most difficult aspects of action research was for schools to organize to initiate the action research process. Teachers at both Starters and Wheel Spinners reported that, initially, they were unclear on what was expected of them as participants in action research. Many participants reported feeling overwhelmed in the early stages of action research. All of the schools reported difficulty finding time to work on action research. Starters reported that after considerable struggle, they eventually began to move forward. One problem Wheel Spinners reported was the inability to resolve competing priorities between their focus area and other school needs. A critical friend for a Wheel Spinner described this problem:

> The group (leadership team) itself wasn't exactly positive where they should go. My impression was that the school had a number of initiatives going on at one time, and they were having trouble keeping their attention on what was supposed to be happening.

Another problem for Wheel Spinners was a tendency to abandon initial ideas for action research and return to the beginning stages of planning:

> We have an overall goal. It's just that there were so many things that we didn't anticipate that we had to back up – way back – and start almost at ground zero in some areas.

Wheel Spinners also reported that they were hindered by a lack of resources needed to address their focus area.

The schools were asked what strategies they used in their attempts to organize for action research. The strategies varied from school to school, but included review of student performance data, whole-school discussions, professional development days, small-group brainstorming sessions, and assistance from university professors and graduate students. Some strategies used by Starters but not Wheel Spinners were surveys, establishing standing committees on different aspects of the focus area, intensive assistance from their critical friend, and teacher study groups.

We asked participants if any breakthrough experiences or events helped them to become organized for action research. Five of the six Starters and one of the three Wheel Spinners reported breakthroughs, and several schools reported breakthroughs during different stages of start-up. There were no common breakthroughs, but examples include the following:

- Participation in an online research network
- Attending a particular Network workshop
- Finally finding adequate time to work on action research
- Assistance from university graduate students
- Meetings with parents
- The acquisition of needed materials
- The realization by teachers that action research is developmental
- A series of faculty discussions
- A meeting with the critical friend
- A combination of grade-level, vertical, and whole-school meetings
- Reflecting on readings provided by the principal

Gathering and Analyzing Data

Once schools selected a focus area and had organized for action research, they were encouraged to gather additional data on their focus areas before designing action plans. After schools had designed their action plans, they were asked to continue to gather and analyze data for the purpose of assessing progress and, when necessary, revising their action plans. Typical types of data gathered included student achievement, attendance, and discipline data; student, teacher, and parent surveys; and administrator and teacher behaviors. The type of data most frequently gathered was student achievement data, followed by teacher surveys, student surveys, and parent surveys. Graduate students at the university developed surveys and analyzed data for some schools. A school administrator expressed appreciation for such assistance:

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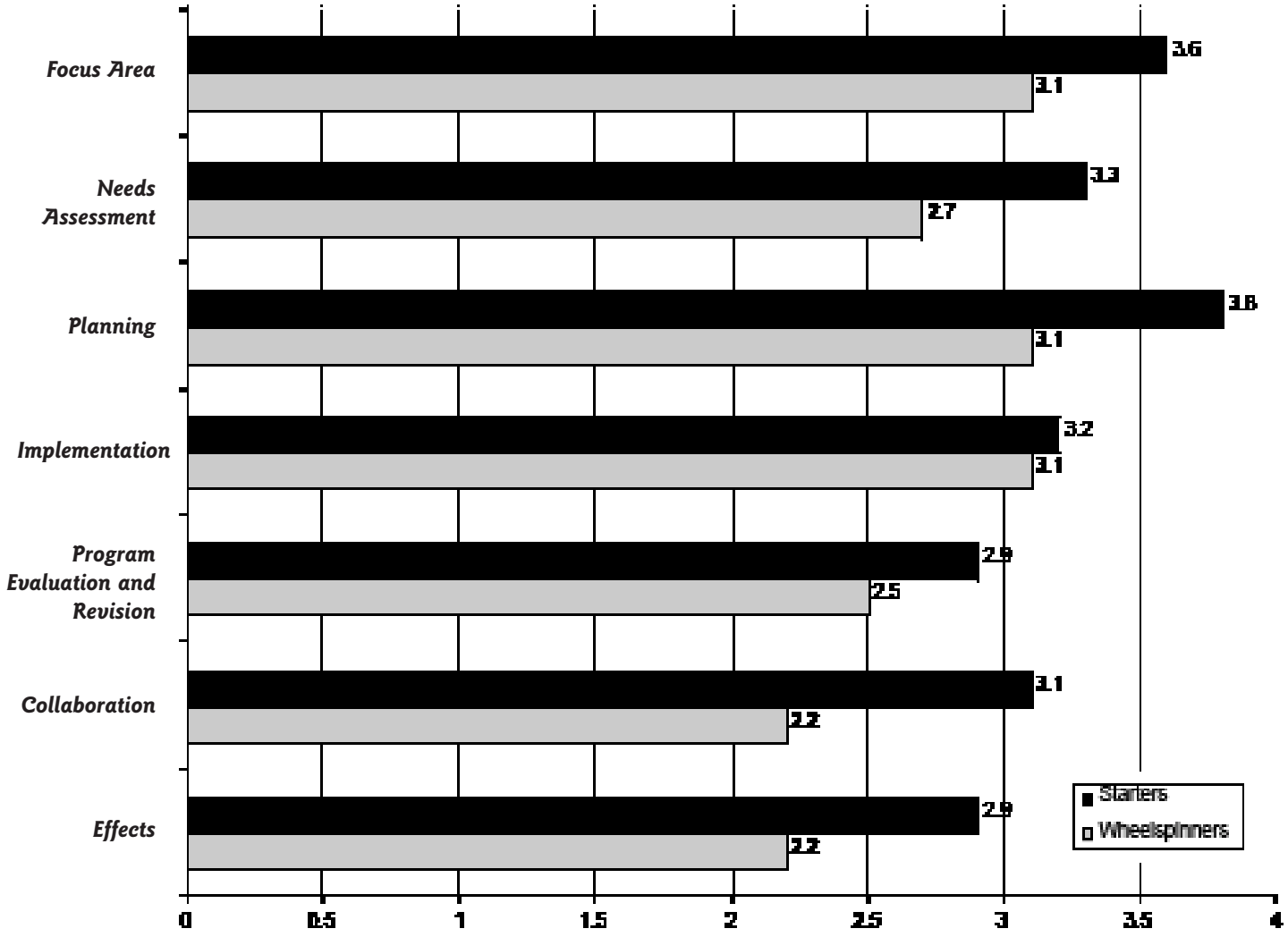
Figure 2
Action Research Composite Profiles: Mean Ratings of Starters and Wheel Spinners



> We were having difficulty finding the time to develop the surveys, and analyzing the data was going to be a big problem. So the fact that we got help from the graduate students alleviated that problem.

The difference between Starters and Wheel Spinners had more to do with the variety of data than the specific types of data gathered. Starters tended to gather a wider variety of data than Wheel Spinners. Two elements in the Action Research Profile that relate to data gathering and analysis are "Needs Assessment " and "Program Evaluation and Revisions." In the composite profiles for Needs Assessment, Starters were at level 3.6 and Wheel Spinners at level 3.1; and in the profile for Program Evaluation and Revisions, Starters were at level 2.9, and Wheel Spinners at 2.5. (See Figure 2.) The relevant section of the survey for data gathering and analysis was Inquiry. (See Table 1.) On each of the three items in this section, Starters had higher means then Wheel Spinners although the differences were not statistically significant.

Action Planning

In the early stages of their action research, some schools engaged in oral planning of improvement activities but did not develop written action plans. According to a teacher at one of these schools:

> We saw the problem and we wanted to solve it. So after we got the baseline data we just started doing (improvement) activities and there was no plan.

Schools that jumped into improvement activities without action plans eventually regretted doing so. A teacher discussed this regret:

> We don't have a visual plan. I mean, we're doing a lot of work, we're doing a lot of dialogue, but it's all oral, and it's not getting down on paper. I think we need help getting it down on paper so that when people come in and visit we can say, "This is our plan. This is how we're attacking it."

Although some schools took longer than others to develop written action plans, eventually all nine schools submitted viable plans. In the composite profiles for Planning, Starters were at level 3.8 and Wheel Spinners at level 3.1. Across the five survey items on Planning,

Table 1

National Center for School Improvement (NCSI) Survey Responses by Question

		Starters (n = 36)	*Wheel Spinners (n = 13)*	
	Content	***Mean***	***Mean***	***Statistical Significance***
	Collaboration			
1	Admin. and Leadership Team	4.61	4.69	0.7795
2	Teachers outside of Leadership Team	4.16	3.00	0.0000**
3	Substantial number of teachers	4.22	2.53	0.0000**
4	All or most teachers	3.83	2.15	0.0000**
5	Action research has increased	4.36	3.39	0.0002**
	Inquiry			
6	Data-based action plan	4.50	4.23	0.3132
7	Assess progress with data	4.39	4.00	0.2020
8	Data made action research successful	4.36	4.01	0.3854
	Planning			
9	Clear objectives	4.44	4.15	0.3005
10	Appropriate planned activities	4.42	4.39	0.9016
11	Appropriate evaluation plan	4.17	4.08	0.7380
12	Process allows for revision	4.50	4.31	0.4075
	Implementation			
13	As planned	4.44	3.62	0.0012**
14	School members participate	4.25	3.92	0.1612
15	Made goal for end of year	4.11	3.54	0.0699
	Assistance from NCSI			
16	Workshops valuable	4.33	4.23	0.7271
17	Utilized critical friend	4.19	3.15	0.0170*
18	Critical friend provided assistance	4.32	3.39	0.0168*
	Effects			
19	School's capacity to improve increased	4.23	4.08	0.5847
20	Professional growth of teachers	4.28	3.42	0.0009**
21	School culture improved	4.08	3.54	0.0535
22	Teaching and learning improved	4.08	3.67	0.0994
23	Making adequate progress on objectives	4.22	3.92	0.1829

* p <0.05 ** p <0.01

Starters had slightly higher means than Wheel Spinners, but none of the differences was statistically significant.

Implementing Action Research

Participants reported major differences between Starters and Wheel Spinners on implementation of action plans. All of the Starters reported moderate to extensive implementation, and all of the Wheel Spinners reported minimal implementation.

Activities completed by the schools as part of the implementation process include the following:

- Developed integrated curriculum
- Compared direct teaching to computer instruction
- Held school celebrations
- Placed students in special programs
- Implemented strategies for improved communication
- Hired additional teachers for new program
- Moved to a block schedule
- Worked to improve student attendance
- Attended training programs

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- Developed a peer coaching program
- Initiated a new science program
- Organized study groups
- Presented demonstration lessons
- Provided mini workshops
- Organized classroom visits
- Arranged parent evenings
- Participated in faculty dialogue

The composite profiles for Implementation showed Starters at 3.2 and Wheel Spinners at level 3.1; however, responses to survey item 13 in Table 1, "So far, we are implementing the action research as planned," indicated a statistically significant difference between Starters and Wheel Spinners at the .01 level. Other survey items on implementation showed higher means for Starters, but these differences were not statistically significant.

The biggest barrier to implementation reported by both Starters and Wheel Spinners was insufficient time. This barrier was related closely to the barrier of competing needs. Wheel Spinners were not able to get past their perception that the time and energy needed to meet immediate needs prevented them from spending time and energy on long-term school improvement. The following was shared by a teacher from a Wheel Spinner:

> I guess, seeing this (action research) is more of a long-term process. The priority goes to the short term and what has to be turned in tomorrow and the next week. Just the demands of the school itself have been a struggle...there are a lot of things that the administration does not want to ask of teachers because they already have three preps and a new type of schedule...And I think there was a feeling of, "you can't ask teachers to do anything else. There is not a single new thing that we can ask them to do and be fair and just." And so it's kind of stalled things.

Compare the above rationale to the report by the critical friend of a Starter on that school's effort to give teachers "the gift of time" for action research:

> The main issue that kept coming up from the teachers was time, time, time. But part of what the school tries to give the teachers is the gift of time, trying to find creative ways to build in time for planning and collaboration. Also to provide substitutes, but not take away from productivity by providing too many subs. Also to have the teachers generate some creative ways to use existing time.

For Wheel Spinners, time and immediate needs were barriers that blocked action research. For Starters, time and immediate needs were barriers that were creatively addressed so that the action research could continue.

Collaborating

Two types of increased collaboration reported by teachers from both types of schools were collaboration within the leadership team (including principal-teacher and teacher-teacher collaboration) and collaboration between teachers on the leadership team and other teachers in the school. In addition to the these types of collaboration, Starters reported increased collaboration between administrators and teachers *outside* the leadership team, increased collaboration *within* teams other than the leadership team. e.g., grade level teams, study groups, and increased collaboration throughout the school. A teacher serving on a leadership team talked about how collaboration on the school's focus area of improved literacy had increased throughout the school:

> I think there is a lot of collaborating going on at different levels, from the technology committee talking about different things affecting literacy to my own grade level's discussions, to teachers in the building at different grade levels. What was critical to us as a (leadership) team was to reach a comfort level for a critical mass of our teachers.

For Starters, improved communication and increased collegiality came hand-in-hand with increased collaboration. A teacher commented on the improved communication at her school:

> I think more of us are looking for solutions and more of us are thinking, "OK, we really all have the same goal even if we don't have the same idea of how to get there." And I think we're willing to listen to each other, and more people are feeling listened to.

A different teacher discussed the increased collegiality that accompanied increased collaboration:

> What I appreciate about our principal and critical friend is that when we meet as a group it's almost like the leadership role is gone. We're all equal group members, and that I truly appreciate because it makes me feel like, "OK, I have a purpose on this team and it's equal to everyone else's purpose on the team."

Another teacher summed up the interaction of collaboration, communication, and collegiality at her school:

> We've had opportunities for whole-faculty discussions, grade-level discussions, and vertical discussion. The administrator sat on a vertical team as a member of the group, not as a leader. And that was important...they're not in charge...we're all in charge. Everyone has a stake in it.

Only one of the Wheel Spinners reported increased collaboration between the principal and teachers outside of the leadership team, and there were no reports from Wheel Spinners of increased collaboration within teams outside of the leadership team. In the composite profiles for Collaboration, Starters were at level 3.1 and Wheel Spinners were at level 2.2. Survey responses on items #1 through #5 concerning collaboration showed statistically significant differences at the .01 levels for four of the five items.

Assessing Network Assistance

General perceptions voiced by participants were that the workshops conducted by the Network were valuable because they provided important information, time for leadership teams to work on action research, and networking with other schools. Participants reported that, beyond time for collaborative work (always built into Network meetings), Network membership also gave the leadership teams time to build internal relationships. A teacher on one of the leadership teams stated:

> We car pool to the meetings together, and we have our breaks together, and we eat lunch together, so it gives us a chance to build a relationship.

Participants reported that Network meetings also fostered relationship building and support among leadership teams from different schools. A teacher noted:

> Providing time for discussion with other schools is helpful. We're not on our own in this. Someone else is doing it with us.

Other perceptions of Network assistance were scattered, with one to three schools reporting the following types of assistance:

- Helped leadership team see the big picture of school improvement
- Helped schools organize for action research
- Rejuvenated leadership teams
- Provided new ideas
- Helped schools focus their school improvement efforts
- Proved resources to assist action research
- Kept school improvement "on the burner"
- Provided leadership
- Provided an "umbrella" for school improvement initiatives

An interesting benefit listed above is that membership in the Network helped leadership teams see "the big picture" of school improvement. One teacher described this perception as follows:

> It's very helpful for us to get away from campus...to see what other schools are doing and hear about their struggles, but also to sit down and process...we are able to back up and see the forest; see the big picture of what's going on in our building.

Many of the same participants who reported that Network membership helped them see the big picture of school improvement also reported that belonging to the Network helped them to stay focused on their action research project. A critical friend expressed this benefit:

> It's really streamlined our direction...Helped us understand, "What's the next step?" I remember there was a meeting where we had to say, "What are some data gathering methods you're going to use? What's your timeline? Who's responsible for things?" So those things are forcing us... I mean forcing in a good way...to think, and look at actions we need to take...It's not a negative, hand slapping pressure. It's sort of, "Hey, we want to see those charts!" Versus, if you are completely self-directed, its easy to get pulled in so many directions and just get sucked into the day-to-day campus activities.

Starters reported that critical friends were a tremendous source of assistance throughout the action research process. A sample of comments on critical friends, shared by participants from different schools, follows:

> She's been our guide...kind of a mentor bringing us through. Everybody feels comfortable with her. She has sat through our faculty meetings, given input, and said, "I'm here to support you in any way possible." She has been an incredible resource. She's done something very similar with her school as a principal prior to her work at the University... she has given us so many resources.

Graduate classes from the University reviewed literature, gathered data, and analyzed data for several of the Network schools. Starters were grateful for such assistance as indicated by a teacher reflecting on a survey that graduate students had designed and administered for her school:

> They took a whole lot of weight off of us. We didn't have to generate a survey. They even come out to the campus to give the survey and explain it. It was so much less work for us. It was very, very helpful.

Participants were asked to suggest ways that the Network could improve its assistance to participating schools. No themes emerged in the responses to this question, but scattered suggestions included making more of the following available: Network meetings; time at meetings for teamwork; leadership training; assistance developing data gathering instruments; assistance analyzing data; opportunities for networking; and workshop structure. On survey items concerning Network assistance, both Starters and Wheel Spinners agreed that the Network workshops provided valuable assistance to the action research process. On questions regarding assistance from critical friends, however, there were statistically significant differences between Starters and Wheel Spinners at the .05 level, with Starters reporting more utilization of critical fiends and more valuable assistance from critical friends.

All six critical friends for the Starters reported that their work with the assigned school had been a positive experience and a valuable learning opportunity. One critical friend described how the role had expanded her own knowledge of action research:

> I've done action research as a classroom teacher. I've taught about action research and had my graduate students do it in the classroom...But campus wide (action research) I've never attempted to do, so it's been interesting to me and it's been a learning experience for me.

Another critical friend discussed how her work with a Network School helped her meet her commitment to do field-based work with K-12 practitioners:

> It's been good for me because I got into schools, which I think is important...I have a personal view that, as (university) faculty members, we have a responsibility to get in there and get our hands dirty in the work. Not just come in and do research and tell people how to do it, but actually grapple with it. And so, for me, it's been affirming, and I think this is the way to develop a relationship with (K-12) faculty.

Two of the three critical friends for the Wheel Spinners reported that being a critical friend had been a negative experience, fraught with frustration, and the remaining Wheel Spinner's critical friend was ambivalent regarding the experience. A critical friend who failed to gain regular access to the school he was assigned to expressed his frustration with the experience:

> I was very frustrated being unable to make a connection and to get into the (action research) process...I was told I would be contacted, or email would be forwarded, or I would know when meetings were happening, and nothing would happen for weeks and weeks. Finally I tracked somebody down and we met and they said, "Oh, we forgot to put your name on the list," that sort of thing. In terms of my role there (at the school), frustration was about it.

Providing Leadership

When asked to identify those who provided leadership for their schools' action research, respondents most often mentioned teachers on the leadership team, principals, and a "collective leadership." Three of the six Starters identified their critical friends as providing leadership. Two of the three Wheel Spinners reported that their principal had dominated the decision-making process.

Starters and Wheel Spinners who reported their principals as providing strong leadership painted very different pictures of how

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that leadership played out. Wheel Spinners were more dependent on their principals, and their principals tended to be more controlling. A teacher from a Wheel Spinner shared the following:

> Janice (the principal) has everybody looking to her for leadership. And so we just all kind of stay in our classrooms and do our thing...and all of a sudden we got an email (from the principal) about this, and we're like, "OK, wait a minute. Is that the direction we really want to go?"

Starter teachers reporting their principals as strong leaders of action research described a supportive rather than a controlling leadership:

> She's willing to learn, and she also is willing to back up (action research), like providing moneys for teachers to go to training...she will send teachers to the training or bring someone in to train us. It's a commitment on her part..."This is what we want to do with this building." And without that, the teachers couldn't do it. We need the leadership...we need the support.

Starter teachers, even from schools where principals provided strong leadership, reported that action research helped to move the school toward collective leadership:

> Now it's not the principal; it's not the assistant principal. It's just us, working together. I think we can share and they can share. (It's) kind of like an even playing field.

A principal from a Starter expressed the same perception:

> [Action research] really empowered all of us to be leaders on this campus. Our project is letting teachers be leaders...so, you know, when you talk about leadership, there are many different levels.

Describing Effects of Action Research

When interviews were held during the second semester of the start-up year, participants generally agreed that it was too early to expect or measure changes in student achievement as a result of their action research. Participants did describe a number of student assessment methods they were using or planning to use to measure student achievement in relationship to their action research. All six Starters reported that action research had resulted in improved collaboration and collegiality among members of the school community. One teacher from a Starter shared her belief :

> One of the overriding themes, I'd say, would be respect. Respect from staff to staff, staff to student, and student to student.

A teacher from another Starter reported:

> I'm talking to people now that I have never talked to before.

Starters also reported more risk-taking and experimentation among teachers. One critical friend described this effect:

> Teachers seem to have been taking a lot of risks. You know, raise your hand and make a suggestion that's kind of out of the box; or they'll be really honest and candid about what's not working. And I think that really shows that there is trust developing...They just are able to say, "Hey, why are we doing this with students? This doesn't seem to be working." And someone else will chime in, "I agree." But it's not a negative gripe session. It seems more solutions-based.

Another critical friend talked about teachers becoming more willing to move out of their "comfort zone":

> What's starting to emerge is people being willing to make their teaching a little bit more public...We talked about breaking into study groups, and there were still some teachers who wanted to get with their grade-level team and study the same things...but there are other teachers who have stepped forward and said, "You know, that's really not what's going to help us most. We need to step out of our comfort zone and be willing to work with other folks to make our teaching more public."

Other perceived positive effects varied widely from school to school. Varied effects reported by participants are listed in the Textbox.

Textbox
Varied Effects Reported by Network Schools

- Improved collaboration and collegiality
- Increased sense of community
- Involvement and synergy of teachers
- Teachers "stretching" more
- Increase in honesty and trust
- Teachers feel more appreciated and valued
- Students feel cared about
- Improved student discipline and safety
- Improved student attendance
- Restructured schedules
- Physical improvements
- Increased student productivity
- School is more student-centered
- Improved school culture and climate
- Increased teacher risk taking
- Increased principal visibility
- Teacher excitement about action research
- Peer coaching and feedback
- Increased teacher dialogue
- Improved curriculum
- Tutorials
- Integrated technology
- Integrated school improvement initiatives
- Improvement of benchmark test scores
- Improved teaching
- Curriculum articulation
- Unity of purpose
- Teacher use of problem solving process
- Increased teacher reflection
- Increased use of guided reading
- Pull-out program to meet students' individual needs
- Changed classroom practice

Wheel Spinners reported far fewer positive effects than Starters. Due to a Wheel Spinner's lack of progress, one of its teachers questioned whether the school should continue to be part of the Network:

> We're not even sure we're meeting the minimum requirements of being associated in this...We're at this point where we can't move any further, so, you know there's a feeling of guilt...The whole issue of being part of this...are we doing it justice? Because we don't feel we are. And I think we're

> certainly questioning whether it's worthwhile for us to even be involved, because we don't feel we're really on the road to anything.

The Action Research Profile on Effects shows Starters at level 2.9 and Wheel Spinners at level 2.2. Responses to survey items on Effects indicate that both groups of participants perceived that action research had increased their school's capacity to improve, a promising sign for Wheel Spinners. However, Starters were statistically significantly more likely than Wheel Spinners to report that teachers experienced professional growth as a result of the action research. Starters showed higher means than Wheel Spinners on improvement of school culture, improvement of teaching and learning, and making adequate progress toward meeting action research objectives, but the differences in these means were not statistically significant.

Discussion

The first year of something new is a learning experience in itself. In starting up a process of developing collaborative schoolwide action research in self-nominated schools, the School Improvement Network opened the door to learning about: (a) working collaboratively; (b) using data to solve a school-based problem; (c) designing and putting into action an implementation plan; (d) involving the whole school in working with the plan if not the process; and (e) doing all this with a conceptual roadmap that exists on paper but not in experience. Each step was the first step toward the end of the process, and each step was learned as it was taken. Given this reality, it is not surprising to see some of the data presented here.

In terms of major aspects of action research, the differences between Starters and Wheel Spinners involved each group's ability to take the ball and run with it. Starters were more able to work collaboratively, involve the whole school, utilize external resources, and begin to see effects. Wheel Spinners had difficulty working collaboratively or had difficulty developing leadership within a collaborative framework. They were less able to define a problem and develop a plan, even changing problems and plans midstream, which led to few effects. In one case, a Wheel Spinner's leadership team considered leaving the Network because they were uncertain of their ability to resolve collaborative and focus issues.

The data from interviews indicated that the schools initially were unclear about what was expected of them. They did not know how to engage with the action research process even though a step-by-step process was presented to them at the onset. They did not have the experience within which to place the process. Both groups also had difficulty with the issue of collaboration and leadership, especially with the principal as a collaborative member of the group. Within the process, each team member, including the principal, had a role to play in deciding what to do and how to do it. In many ways, the principals became outside resources as well as team members in that they were able to administratively "make happen" what the group decided. In two of the Wheel Spinners, the principal was unable to step outside the administrative hierarchy, or the team was unable to claim their authority within the context of the action research task. A teacher from one Wheel Spinner said of that school's principal, "She has good ideas, better than ours."

As discussed in both Allen and Calhoun[11] and Peters,[12] the issue of finding time for teamwork, planning, and reflection was present in all schools, even with the set-aside work time at the university workshops. Once teams returned to their schools, everyday life engulfed them, and the structure of the workplace had to be adjusted to provide time. Another issue mentioned by teams in this study that has parallels in the previously mentioned studies was whether the action of the leadership team involved the whole school and was recognized by the whole school, or whether the team existed autonomously as a small group without the recognition, support, and resources of the entire school community. Only Starters' leadership teams (and not all of them to the same degree) talked about their ability to be a part of a whole-school effort. Wheel Spinners' leadership teams saw themselves mostly as an autonomous group.

If working collaboratively as a team and as a part of a schoolwide effort presented challenges, the issue of the culture of schools and the normative relationships and responsibility of parties within a school also came to the forefront in both the interviews and the quantitative data. Starters did better than Wheel Spinners in working within the culture, adapting structures as needed by the team or the plan. Wheel Spinners and their leaders had more difficulty overcoming normative relationships and structures. They saw themselves as limited in various ways, either by the principal or by other issues in the school context.

In a similar vein, Starters did better than Wheel Spinners in their organization of effort and diversity of data collection strategies. Starters used a larger variety of ways to collect data, from reviewing archival data to conducting focus groups. They also were better at finding the resources they needed and in utilizing the resources that were available. Starters worked better with their critical friends, utilized graduate students to help with aspects of their projects, and asked the university and outside sources for assistance when they saw the need for. In fact, Starters said that breakthroughs in finding time, resources, or assistance meant sudden movement forward in ways that they did not always anticipate. Working the system, being creative, and reaching out helped put plans in action, or helped solve problems related to putting them in action. In contrast, Wheel Spinners did not utilize potential assistance, and in two of the sites, actively resisted contact by critical friends, perhaps due to structural norms and issues at the schools.

Planning and implementation also proved a challenge to all schools. Many of the schools had never developed a plan geared to implementation despite their work on school improvement plans. Action plans took a long time to develop and formalize, and many would have never reached the formal state without friendly pressure from critical friends and the university facilitators. At one university-school workshop, for example, an afternoon was devoted to presenting information about implementation strategies and talking to individual groups about how to go about putting their plans in place.

Despite all of their struggles, both groups perceived that action research had increased their school's capacity to improve. They also felt they had benefited from the university-sponsored workshops and had learned something about using data, planning, and implementing plans. They still had concerns about what leadership might look like for this kind of process and requested more training on leadership skills and more ideas about how to be leaders in their schools. By the end of the year, all groups were ready to move forward to year two with what they had experienced in year one, regardless of effect or outcome. For Wheel Spinners, the outcome in some cases was resolving their team, leadership, and context issues and declaring themselves an action research team ready to start again.

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Conclusion

This study provides a good example of change being a learning experience as much as an outcome. It suggests that becoming an action research team is as much an innovation as the changes the team selects to put in place through the process. As such, it also suggests that training in the "how" of being an action research team, including how to be leaders, how to implement, and how to utilize resources, is as important as the "what" of action research. Calhoun[13] and Allen and Calhoun[14] emphasized the need for ongoing professional development as part of schoolwide action research. While universities may do professional development on what the action research process is, they seldom attend directly to the need for professional development as an integral part of the action research process itself. Practice makes perfect; and as these teams continue to practice and resolve these issues, their schools will change as well, not only for the sake of specific improvement goals, but also in terms of the school culture and work environment.

Endnotes

[1] Author's Note: This study was sponsored by the National Center for School Improvement (NCSI) at Texas State University–San Marcos. NCSI is funded in part by grants from the United States Department of Education and Washington Mutual.

[2] Nigel Bennet and Alma Harris, *Hearing Truth from Power? Organization Theory, School Effectiveness and School Improvement*, a paper presented at the Annual Meeting of the American Educational Research Association, Chicago, Illinois, March 1997.

[3] Alma Harris, *School Improvement: What's in it for Schools?* (New York: Routledge Falmer, 2002); Frances O. Rust and Helen Friedus, Ed. *Guiding School Change: The Role and Work of Change Agents* (New York: Teachers College Press, 2001).

[4] David Hopkins, Mel Ainscow, and Mel West, *School Improvement in an Era of Change* (New York: Teachers College Press, 1994); Bruce Joyce, Emily Calhoun and David Hopkins, *The New Structure of School Improvement: Inquiring Schools and Achieving Students* (Philadelphia: Open University Press, 1999); Susan J. Rosenholtz, *Teacher's Workplace: The Social Organization of Schools* (New York: Longman, 1989); Charles Teddlie and Sam Stringfield, *Schools Made a Difference: Lessons learned from a 10-year Study of School Effects* (New York: Teachers College Press, 1993).

[5] Emily F. Calhoun and Lew Allen, *Results of Schoolwide Action Research in the League of Professional Schools*, a paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, Louisiana, April 1994; Carl D. Glickman, Stephen P. Gordon, and Jovita M. Ross-Gordon, *SuperVision and Instructional Leadership*, 6th ed. (Boston: Allyn & Bacon, 2004).

[6] Emily F. Calhoun, "Action Research for School Improvement," *Educational Leadership* 59 (March 2002): 18-24.

[7] Lew Allen and Emily Calhoun, "Schoolwide Action Research: Findings from Six Years of Study," *Phi Delta Kappan* 79 (May 1998): 706-710.

[8] Lewin (1946), as quoted in Calhoun, 211.

[9] Allen and Calhoun, "Schoolwide Action Research."

[10] Judy Peters, *Expecting Too Much from School/University Partnerships for School Improvement*, a paper presented at the Annual Conference of the British Educational Research Association, University of Exeter, England, September 2002, 11.

[11] Allen and Calhoun, "Schoolwide Action Research."

[12] Peters, *Expecting Too Much*.

[13] Calhoun, "Action Research for School Improvement."

[14] Allen and Calhoun, "Schoolwide Action Research."

APPENDIX

National Center for School Improvement
School Improvement Network

Spring 2004 Survey

Name of your School: _____

Check One: ___ Campus Administrator ___ Teacher ___ Critical Friend

PART I: MULTIPLE CHOICE

For each item in Part I, use a number 2 pencil to blacken the oval on the answer sheet that corresponds to the single most nearly correct response to that item.

Possible responses to the items in Part I are:

(A) Strongly disagree
(B) Disagree
(C) Not Sure
(D) Agree
(E) Strongly Agree

Collaboration

1. The administration and leadership team (the team that attends NCSI meetings) are collaborating on the action research.
2. Teachers outside of the leadership team (the team that attends NCSI meetings) are collaborating on the action research.
3. A substantial number of teachers are collaborating on the action research.
4. All or most of the school's teachers are collaborating on the action research.
5. The action research has increased collaboration within the school community.

Inquiry

6. The action plan is data-based.
7. Data have been gathered to assess the progress of the action plan.
8. Data analysis has made the action research more successful than it would have been without data analysis.

Planning

9. Our action plan's objectives are clear.
10. Our planned activities are appropriate for reaching our objectives.
11. Our evaluation plan is appropriate for assessing the effects of our action research.
12. Our action research process allows us to revise our action plan as appropriate.

Implementation

13. So far, we are implementing the action research essentially as planned.
14. Members of the school community who were expected to participate in the action research are, in fact, participating.
15. As the year ends, we are where we want to be regarding implementation of the action research.

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Assistance from NCSI

16. The NCSI workshops have provided valuable assistance in the action research process.
17. The NCSI critical friend has been adequately utilized in the action research process.
18. The NCSI critical friend has provided valuable assistance in the action research process.

Effects

19. The action research has increased our school's capacity to improve.
20. Teachers at our school have experienced professional growth as a result of the action research.
21. Our school culture has improved as a result of the action research.
22. Teaching and learning at our school has improved as a result of the action research.
23. We are making adequate progress toward meeting our action research objectives.

PART II: OPEN-ENDED QUESTIONS

Write the answers to items 24 through 28 on this page

24. What has been your greatest challenge this year while participating in the action research?

25. What has been the most positive aspect this year of your participation in the action research?

26. What has been your major learning this year as a result of participating in the action research?

27. What is the most significant change in your professional behavior this year as a result of participating in the action research?

28. On the attached rubric, place an X in the box that best represents where your school is relative to each of the seven elements of action research listed in the left hand column of the rubric.