Leading Change to Improve Student Achievement

Novice Leaders Take the Reins

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Abstract

This article addresses the effects of education leadership candidates' experiences taking a non-traditional research course in which they identify a specific instructional performance gap in their school sites, then engage in action research, consult published literature, and develop an action plan to address the gap. Candidates are required to implement these plans during their internships. Three case studies assess the effects of this research course. Findings indicate that candidates were influenced by the course in various ways, yet the challenges of leading change without formal authority are great. Implications are that there is high potential for such a research course to help prospective and practicing leaders learn how to lead collaboratively to improve student and school performance.

Introduction

Two strong cross-currents roil the waters of education leadership preparation programs: (a) recognition that leadership is vital to school improvement (Leithwood & Riehl, 2003; Waters, Marzano, & McNulty, 2003) and that this is especially so in challenging schools (Leithwood & Steinbach, 2004); and (b) the claim that programs do a poor job preparing leaders to assume their critical role in helping all students to achieve at a higher level (Levine, 2005; SREB, 2006). Reading the criticisms of leadership programs suggests that professors are either asleep at the wheel or incapable of meeting the challenges of the contemporary policy climate and the needs of 21st-century K–12 students. The problem is more subtle than

that, however. To address the press for higher test scores for students who traditionally challenge schools and districts requires leadership preparation program pedagogy and curriculum that focuses on leading instructional improvement. But engaging pedagogy and worthwhile curriculum are not enough. Leadership preparation must also include the means for candidates to test and reflect on their ability to lead instructionally focused change (Bauer & Brazer, forthcoming).

Purpose

There are two specific purposes of this paper. First, we wish to learn how a nontraditional research course helps candidates develop the ability to use research to lead school improvement and whether it predisposes candidates to engage in genuine inquiry prior to finding and implementing solutions to educational challenges. The second specific purpose is to learn the impact of candidates' required School Improvement Projects (SIPs), once they have been implemented, both on the students in their schools and on their own leadership behaviors.

Four years ago, we changed our traditional research course with its focus on administrators becoming good consumers of research into a course that emphasizes using research literature, school-site data, and leadership skills to engage school colleagues in change processes that are directed squarely at improving the performance of an identified portion of their school's student body. Using Research to Lead School Improvement is the resulting new course that engages education leadership candidates in a shift in their thinking that is important in the current political context. We require our students to move their focus from data alone to research—both published research and action research at their sites. Fullan (2001) might describe this as creating knowledge, rather than just understanding facts. Candidates' knowledge creation and leadership are tested during their internships as they implement school improvement project proposals created in the research course. This article analyzes the results from three cases of our candidates' efforts to lead school improvement.

Significance

Although there is substantial evidence that many programs have evolved more than critics claim (Orr, 2006), there is little discussion in the education leadership literature about how a research course influences leadership practice. Evidence suggests that there has been an increasing emphasis on research training in educational leadership programs (Hackman, Bauer, Cambron-McCabe, & Quinn, 2009) compared to just a few decades ago when only about a fifth of programs included research training in their curriculum (McCarthy, Kuh, Newell, & Iacona, 1988; McCarthy & Kuh, 1997). But the emphasis on research may not produce entirely desirable results. Levine (2005) claims that 90% of principals completed a research class in their preparation programs, but only 56% reported

that this coursework was valuable to them in learning how to use research in their jobs.

There is a flaw in the common logic of action for research courses that suggests if prospective administrators become good consumers of research (the goal of the traditional master's level research course), they will then apply those skills in their leadership roles. Learning how to *read* research is not the same as learning how to *apply* research knowledge in a school setting with the intent of improving student performance. The course studied in this paper shifts the logic of action away from merely consuming published research to using it along with analysis of school data to engage in action planning and implementation focused on improving instruction. The result is an informed contribution to the debate about whether or not leadership preparation programs are up to the task of insuring that prospective administrators are ready to lead schools.

In addition to the research significance discussed above, this study has practical significance both for preparation programs and for school districts. A nationwide impetus to reform leadership education stems in part from increased pressure on schools from high-stakes accountability policies, and the realization that demands on the principalship have shifted from mostly managerial responsibilities to instructional leadership (Kochan, Jackson, & Duke, 1999). One of the most often-mentioned changes to principals' roles involves using assessment data and educational research to inform decision making, and enlisting stakeholders in data-informed school improvement efforts (Fullan, 2001; Leithwood & Riehl, 2003). Demonstrating the effects of a redesigned research course on leadership practice and learning suggests to preparation programs a strategy for greater success with graduates. It also points to ways in which school districts could engage leaders in in-service training that helps them to use research to lead school improvement.

Research Questions

Our determination to learn the effects of a research course focused on improving instruction is guided by the following research questions:

1. Do candidates thoroughly analyze student achievement problems prior to implementing solutions?
2. Do candidates perceive themselves as using research in the manner we espouse in the research course?
3. How consistent with research course principles were candidates when they led their SIPs?

Answering the above questions is facilitated by a research perspective that reveals the espoused goals of the course candidates took, the theoretical underpinnings of the course, and how it is integrated into candidates' internships.

Research Perspective

Changes made to the research course briefly described previously occurred within a general context of program change. Motivated by feedback received in discussions with the school districts we serve, a desire to improve the internship, and pressures from The National Council for the Accreditation of Teacher Education (NCATE) to demonstrate our own candidates' achievement, we recognized as a program that we needed to include a new research course in the licensure sequence. Our faculty further agreed that research course outcomes should be linked to students' internship experiences so that what was learned could be applied. Furthermore, and most important, we had the goal of our candidates making worthwhile contributions to school improvement while they were in the pre-service stage. The logic of action that took shape is illustrated in Figure 1 and elaborated in the subsection that follows. The rationale behind how Using Research to Lead School Improvement is structured is our hypothesis regarding how instructionally-focused change can occur in schools and therefore serves as the theoretical foundation of this paper.

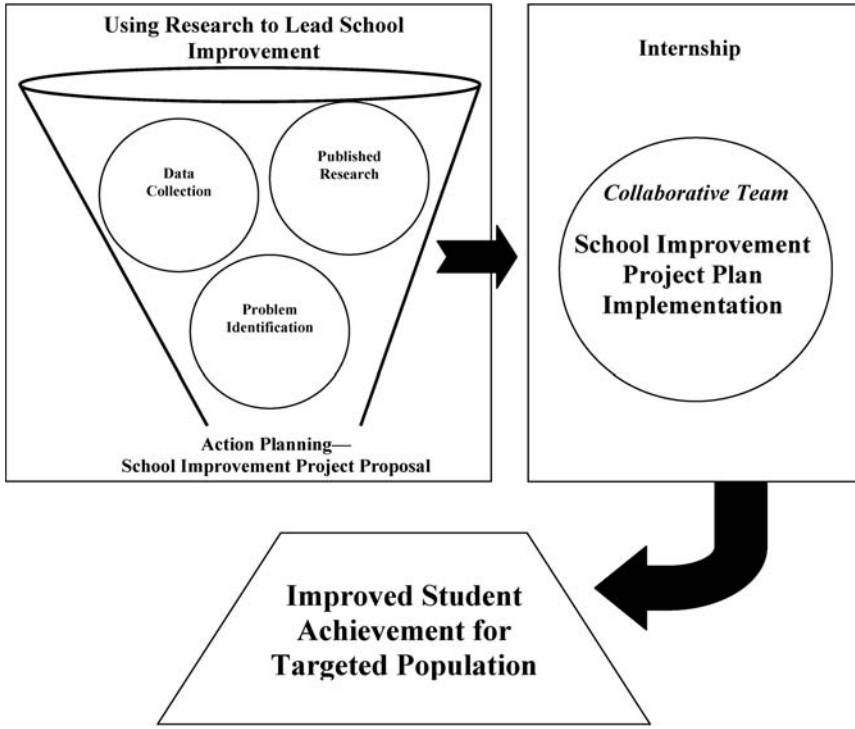

Figure 1. Course and program adaptations to practice school improvement focused on instruction.

Course Logic of Action

In Using Research to Lead School Improvement, the revamped research course, students learn how to conduct analysis based on readily available school data, how to understand published research, and how to engage a collaborative team in problem identification and action planning. The final product of this course is an action plan called the School Improvement Project Proposal. This plan is then carried into the internship and implemented with the assistance of the collaborative team established as the plan was being developed during the research course. Effective plan implementation yields observable improvements in student achievement for the population targeted by the candidate.

Using Research to Lead School Improvement is based on an action research model that begins with problem identification. Students are required to learn about and report on their schools' current goals and achievement weaknesses relative to those goals. We refer to this as locating "performance gaps" that are troubling for their schools. The official school goals represent espoused theories, i.e., what the schools say they are doing to support and enhance student achievement. Performance indicators (test scores, qualitative measures of student success, etc.) serve as proxies for theories-in-use, or what teachers actually do with their students. Misalignment between espoused theories and theories-in-use creates a problem for the school because students are not being served in the ways in which schools say they should be (Argyris, 1999; Osterman & Kottkamp, 2004).

In the process of considering and articulating their performance gaps, candidates collect data from their school sites, potentially in several forms. They typically go first to published state and district testing data, which is most accessible to them. Candidates also frequently examine teacher-made common assessment data, if available, to search for assessment patterns among the students experiencing the performance gap in which they are interested. Somewhat more unusual are candidates who interview teachers, administrators, and students in an effort to understand their perspectives on the identified gap. In the process of data collection, candidates are functioning as researchers striving to answer the fundamental questions: (a) what is the nature of the performance gap I have identified?; and (b) why does this performance gap exist? The second question emerges as root-cause analysis (Preuss, 2003) in candidates' SIP proposals. Answers to both questions enhance the arguments they ultimately make for specific solutions proposed in their plans.

Having identified and fully articulated a performance gap for a specific subpopulation of students in their schools, candidates seek published research that informs the problem or gap they have identified. They also investigate research that indicates promising solutions well matched to specific performance gaps, taking into account their schools' contexts. We require candidates to use a combination of analytical literature reviews, theoretical expositions, and empirical research to create a solid base from which they can analyze their local problems.

This is difficult literature for many of our candidates and we find it necessary to steer them away from more easily digested opinion pieces. Understanding the published literature that informs their problem area causes candidates to engage in the library aspect of scholarship so that the arguments they ultimately build into their SIP plans are well supported and persuasive.

As candidates progress through Using Research to Lead School Improvement, they are required to recruit and convene a collaborative team. Candidates are thus asserting their own leadership through their SIP planning (and ultimate implementation) and they are further distributing leadership to others by involving them on their collaborative teams. This is consistent with our leadership preparation program's emphasis on shared or distributed leadership. On a more practical level, the collaborative team provides a group of experts who can help the candidate to write a more effective SIP proposal and a group of ultimately committed implementers who will spread the intent of the plan more widely throughout the school (Osterman & Kottkamp, 2004). The work of the collaborative team also helps to "unfreeze" colleagues in preparation for making change in instructional practices (Lewin, 1947; Weisbord, 2004) and builds a committed coalition of early adopters of proposed changes (Rogers, 1995).

Through most of the research course, candidates are asked to refrain from proposing specific responses to the performance gaps they identify. Our intent is to maintain a spirit of open inquiry as long as possible so that the true nature of the problem they have identified can be more thoroughly understood and so that members of the collaborative teams and candidates' principals have ample opportunity to articulate the problem to be addressed. A common understanding of the problem that is widely accepted in the school helps to build support for solutions proposed in the final proposal (Bauer & Brazer, forthcoming; Osterman & Kottkamp, 2004). A further benefit of this approach is that candidates are learning and practicing leadership skills in ways that would be unavailable to them if they were to work in isolation.

In the last 2 to 3 weeks of the course, candidates prepare their SIP proposals. The final write-up includes the problem analysis they have engaged in up to this point, including a root-cause analysis, and goes on to propose a set of solutions. Intended outcomes, potential unintended consequences, budget implications, and evaluation guidelines are all specified in the proposal.

Four course products indicate progress on the path from exploring their local situation to proposing an action plan. The Improvement Target Proposal explains the performance gap at the candidate's school, using concrete evidence to support arguments made in the paper. An annotated bibliography helps the instructor to see if the student is collecting worthwhile published research and forces the student into the library, most often through online databases. The Research Brief provides a synthesis of the most helpful published research that both deeply analyzes the problems and explains promising solutions. The final product, the School Improvement Project Proposal, is the blueprint for the work the student

will carry out during her or his internship. It is the candidate's hypothesis about how student performance will be affected by specific actions taken in the classroom and the school.

Methodology

We use a qualitative approach to test the logic of action embedded in Using Research to Lead School Improvement. Interview and analysis of relevant documents provide the data needed to answer this study's research questions.

Setting

Candidates participating in this study are drawn from off-campus cohorts in the Education Leadership Program at George Mason University between 2006 and 2009. These candidates work in schools in suburban districts in the Washington, D.C. metropolitan area. The schools vary in the specifics of their student populations, but in general they are diverse ethnically, socioeconomically, and linguistically. Candidates studied are experienced classroom teachers and were working toward administrative licensure when they were enrolled in Using Research to Lead School Improvement. They took the course in their first or second semester in the program. Following the course, different instructors monitored internships for these candidates that took place over a 12–18 month period.

Participants

The research presented in this article is preliminary to a larger study. We drew 3 participants from among 30 students in two separate classes taking Using Research to Lead School Improvement during the 2007–2008 academic year. Participants were selected based on what we knew regarding the quality of their SIP proposals and the extent of their implementation. We also selected participants to represent a wide variety of projects in a range of settings.

Data Collection

The main body of data for this study comes from interviews with each candidate. A structured interview protocol derived from the research questions and research perspective was used with each candidate. We conducted a more formal interview process in order to achieve consistency of answers across different interviewers and participants.

Data Analysis

All qualitative data sources were coded and analyzed with the assistance of NVivo 8. Initial interview transcript coding was based on categories from this study's research questions and research perspective. We added codes that emerged from careful reading of interview transcripts, particularly when specific ideas or themes appeared to be important to participants. We used research

memos to record our thinking about transcripts and documents provided to us by participants (Maxwell, 2005).

Following initial coding, we derived common themes and important contrasts among research participant experiences. We combined our thinking about important trends to create analytical case studies for each participant (Miles & Huberman, 1994). They served as tools for us to develop a deeper understanding of what the evidence from each participant's experiences indicated in terms of answers to our research questions. The case studies provided grist for our discussions and arguments regarding participants' experiences writing, implementing, and reflecting on their SIP proposals.

Reliability

We pursued two avenues to achieve reliability. The first is that both authors engaged in data coding of all documents. We compared our coding and discussed cases in which we differed. When we could not agree, we opted to code more inclusively, thus encompassing both points of view. Generally speaking, we were in agreement about how to code the data, indicating consistent interpretations of transcript and document content. Our second means of supporting the reliability of our conclusions was achieved through triangulation. Document analysis helps to corroborate or contradict what participants told us in interviews.

Findings

The research questions for this study deal with how engaging in school improvement projects influences candidates' leadership learning, and how they react to experiences they encounter in their efforts to lead their projects. To explore these questions, we offer three case stories grounded in these students' experiences at various stages in our education leadership program. (Pseudonyms are used).

Creating an Online Competency Tracking System

Nate is a career-switcher who began his professional life in television production in the private sector and moved on to non-governmental organization work. Inspired to work in education over 10 years ago, his entire teaching career has been in an inner-ring suburban school district. Nate has devoted himself to teaching students radio and television production in a district alternative education setting intended to provide students with entry level job skills and knowledge that could lead to post-secondary schooling. This special school is referred to locally as the Career Center.

Nate knew what his school improvement project would be from the 1st week of class. For at least 2 years he had been developing an online competency tracking system for the Career Center where he works. The state of Virginia has established numerous competencies for students engaged in career and technical education and the Center was required to submit data annually on how their

students were progressing. This onerous task had not been going well, hence Nate's interest in addressing the issue. His belief was that if teachers had a clearer indication of which competencies students had actually mastered and which they had yet to learn, student achievement would improve because instruction would be guided more by students' needs than teachers' intuition.

The instructor for the research course was worried that Nate would not engage in the kind of problem articulation required for the school improvement project because he was already working on his solution. The concerns were unfounded because Nate had a great deal of intellectual curiosity and truly wanted to understand the nature of the difficulty that motivated him to work on the online tracking system in the first place.

The problem, from the Career Center perspective, was that teachers were not truly keeping track of specific student competencies. Nate explains:

> It was a big problem because there was no practical way to keep competency data, even though we as a local district were required to report that data, we had no data to report. So, a decision was made somewhere along the line to co-equate grades with skill data because grades [were] all we had. But as a 10-year veteran of the classroom, I knew that grades actually may or may not have much to do with skills at all, that students were getting grades because they tried hard, because they came faithfully to class. Sometimes students had a low grade and very high skills and vice versa.

Having analyzed the problem of Career Center students' achievement, Nate's skepticism about grades as an indicator of skill acquisition led him into published research about assessing students' skills. Not finding what he needed in research directly focused on education, Nate went to parallel literatures:

> I realized, who else cared the most about competency tracking? Med. schools. The reason was they had to take the skills seriously. They couldn't be 65% on stopping the bleeding. You either stopped the bleeding or you didn't. The other interesting . . . group that cares about skills is the military. You've got to be able to put the M-16 together in the dark, or you could die. . . . I didn't use the military example near as much as I used the med. school example. I think that validated the problem. You know, [career and technical education] often has a "less-than" feeling. They're like, "Yeah, we're teaching skills, but it's really not as important as English writing and arithmetic, or whatever." All of a sudden they felt like, "Hey, the med. schools care, we do too." It really was very validating for them. It deepened my sense of confidence in the project in the sense of, hey, this is really important.

The previous quotation is part of the answer to research question 2 about using research as we espouse in the course. Nate learned that he could use published

research as a persuasive tool with peers who are potential implementers of his project. Additionally, perhaps because of our insistence on fully understanding problems before jumping to solutions, Nate was able to see more clearly the danger of adopting preconceived solutions and how research could bolster his arguments to go in a different direction:

> There's one other thing the research did. There was a lot of romance around, "We want to use Palm Pilots to track the skills." Believe it or not, there were administrators who were just in love with that idea for whatever reason. . . . It was great to look in the research that one of the med. schools totally bought into that, too and found it not worth the money it cost to do it and it made no [sense]. . . . I think that having concrete research feedback . . . [diminished] the romance of a non-rigorous idea, at least an unproven idea. How many times in education do people just lock onto an idea because it seems cool, but never ask themselves the most fundamental questions: is this worth the money?

Nate was probably motivated by wanting to implement his online competency tracking system that was already in development, but he could see the dangers of adopting a preconceived solution, helping him to approach his school improvement project in a manner consistent with course principles (research question 3).

Nate had two main political forces that pushed his school improvement project toward implementation and institutionalization. The Virginia Department of Education was very interested in his group's creation of the online competency tracking system and treated Nate's early efforts as a pilot. The state also funded about half the cost of making the project operational. Consequently, Nate found himself at the time of this study in the position of having his school district adopting his school improvement project and the potential of the system he and his team created becoming the model statewide.

Nate's case is an example of what appears as of this writing to be a successful school improvement project that serves an entire district, and perhaps one day the state. As with the other projects described in this article, we do not yet know what the effect may be on student achievement. The first step is to create a more accurate baseline than has existed in the past, then it will be possible to track skill achievement among Career Center students.

Science Portfolios

In contrast to Nate, Sally is a first-career teacher who was in her 2nd year of teaching when she enrolled in our research course. She had been teaching science at the same middle school for 3 years at the time of this writing. In the short period of time that Sally has been teaching, she has moved from a 6th grade team in her first 2 years to a 7th grade team in her 3rd year.

Similar to Nate, Sally appeared to enter the research course with her school improvement project action plan already formulated in her head. An extremely conscientious student, she acquiesced to the course structure and sequence by thoroughly exploring student achievement data in science at her school and by using research to more thoroughly understand her problem and potential solutions.

Sally was somewhat atypical of secondary school teachers in that her concern was more about student learning processes than specific content. The research course instructor learned that she not only had a head start on the solution to the problem as she understood it, prior to the course she had worked collaboratively with a group of teachers to analyze a specific learning problem:

> Well, at first I had a terrific collaborative team of sixth grade teachers that I worked with. In the year prior we talked about kids not taking ownership in their work. They didn't understand how they knew one part of a test, but they didn't know another. So, we were looking at two specific parts: ownership and the fact that they weren't understanding the best ways that they learned. We wanted to tackle that problem. . . .

Even before she was enrolled in the research course, Sally was predisposed to work collaboratively with other teachers and to articulate a specific problem before adopting an action plan. Having come into the class embracing these two fundamental principles of the course, Sally appeared to have great potential for success.

Sally's case is rather unique because of the dispositions among the teachers on her 6th grade team. In many cases, we find that students have difficulty finding willing partners at their school sites who will engage with enthusiasm and help with the workload. This was not a problem for Sally.

> I was brand new and we had other teachers that were just brand new to the building itself and brand new to teaching. . . . We really enjoy professional development, we really enjoy finding new ways to reach the kids, and we're willing to try new things. So, I think we were all just fit together and it was a perfect situation.

The team ultimately decided to use portfolios as a means of helping students to take greater responsibility for their work and to gain a sense of how they learn best. There was some published research that Sally used to bolster the rationale for her project, but she was more focused on using her school's student achievement data and teachers' observations of student behavior as the foundation for her school improvement work. The scientist in her takes over as Sally describes what she might have done differently to strengthen her project:

> I think it would have benefited myself and my group if we had some assessment tools at the beginning and the end to compare to . . . [and to] be able

> to see it through data. . . . How do we collect information on this and really see if this is what we are just brainstorming in our heads? 'Cause this is just the ideas that were generated with the group [saying], "Here's what we're noticing." It was just observation data, or very subject[ive] descriptions. It wasn't, to me, concrete, involving numbers. It wasn't a format where we said, "Here's all our problems and here's where we need to run with this." I think if we had more of those tools, we might even have come up with a different solution, but for us we felt it was successful, especially the night watching parents interact with their kids to understand why they learned this or, "Oh, my child does this really well, but doesn't do this so well."

In her reference to "tools," Sally espouses the fundamental problem articulation principles of the course and some regret that she had not adopted them from the beginning.

Apart from some desire to have approached her project differently, Sally achieved a level of success in implementation that was beyond what we anticipated for the course. Originally, she conceived of the portfolios being used in science only. Her 6th-grade team was so enthusiastic about the idea, however, that they all adopted the technique and made it the centerpiece of their effort to improve student achievement within their team of 120 6th graders.

Despite early success, Sally encountered two main barriers to implementation after the initial year. She voluntarily moved to a 7th-grade team that consisted of teachers with entirely different predispositions toward change—they resisted fiercely. Sally's department chair and principal lost whatever small amount of interest they may have had in the initial project because they believed that it distracted teachers and students from meeting state-wide achievement goals and put test scores at risk. Sally, of course, believes exactly the opposite. She attributes the difference between her former 6th-grade team and current 7th-grade team to a difference in perspective on students:

> Because the [sixth grade] kids are coming in new to us from elementary, we're really trying to get them acclimated to their environment and really push for independence and being able to self-learn on their own, things of that nature. Seventh grade, I think a lot of seventh grade teachers already expect them to do all this, so I just don't think that some of the other teachers I work with foresee the benefits of portfolios. Even though I explain it to them as much as I can and I show them things, I don't see them being as enthusiastic as my last year group.

An issue that Sally did not articulate is one of status within the school. We believe that one of the great challenges for our students is to lead without authority. As a teacher new to the profession, Sally appears to have had much greater influence over peers in a similar place professionally than was the case with

veterans. Without meaningful administrative backing, she had only the power of her arguments and brief experience as tools of persuasion. Despite her best efforts, key implementers at the 7th-grade level never developed much interest in portfolios. Sally uses the portfolio strategy in her own classes and the 6th-grade team continues to implement the change. Thus, her school improvement effort is still being experienced by students, but not as widely as Sally hoped.

Positive Behavior System

Anna, a veteran elementary school music teacher, was approaching the 1-year mark on her internship at the time of this writing. We require candidates to spend a minimum of 1 year in their internships so that they have enough time to, among other things, fully implement their school improvement projects.

One of the hallmarks of Using Research to Lead School Improvement is the focus on instruction. As we noted previously, perceptions of the principalship have evolved from an emphasis on management to an emphasis on leadership, particularly instructional leadership. Despite this reality and our own predisposition toward teaching and learning, many of our students tend to perceive administrators as largely preoccupied with student discipline. Anna's effort to improve the Positive Behavior System (PBS) in her school is reflective of general concerns about student discipline, school climate, and the district-adopted strategy for managing student behavior. We negotiate these influences with our students by asking them to make connections between discipline and learning. Anna expresses the typical logic of action:

> My hope is based on referral data and student information data. We will identify students who need to be in the program, have them successfully complete the program, and there will be positive behavior, self-monitored behavior, which in turn improve[s] their achievement level in the classroom.

By taking on PBS, Anna resurrected an initiative from 2 years before that had faded. She learned through a survey she conducted that teachers were not doing much with PBS because record keeping about student offenses and consequences received was inconsistent. Anna was able to focus on developing a strategy for repeat offenders, but she first had to learn who they were.

Spotlighting repeat offenders required structural changes at Anna's school to make disciplinary record keeping more consistent. Changing teacher behavior was a challenge, but the school was able to move toward more consistent handling of referrals. With this in place, a check-in check-out system was born.

> [O]nce you hit the three office referrals, you're brought into consideration for the check-in check-out program. The counselors sit down with the teacher, decide whether this is a good fit for the student, [then the student] go[es] into the program. . . . They have a mentor they check in and check out

> with every day, which is me. I'm the encourager. Their teacher checks to see how they are doing [during the day], based on the PBS system.

Anna's school improvement project work coincided with off-site PBS training regarding the issue of repeat offenders. She points out a critical factor for all of our students attempting to make changes in their schools—administrative support.

> It was hard to get the ball rolling. The head of the PBS committee went to the training in the summer, brought it back, and had to get buy-in by the committee. Of course I was on board, she brought it to me as a solution to what I had proposed last spring. The hard part was getting the admin to go to the training, and to get them involved with what we were doing and have their support. But now . . . we have the principal as part of the sub-committee, and she has had a hand in training the staff at our school-wide staff meetings.

Critical administrative support helped Anna to get discipline record keeping cleaned up and to weather criticism from those teachers more interested in punishment than preventive measures. She reported that, given enough time to work, teachers saw benefits from PBS.

Anna, similar to Nate and Sally, found that her collaborative team was critical to the design and implementation of her improvement project. An unexpected outcome for her, and for us, is that successful collaboration can sometimes leave a leader feeling a bit empty.

> The only thing [that] . . . lingers in my head, sometimes I wonder if this is really my project. I feel that at the beginning I did the survey, we talked it over as a team, we saw the needs, I stressed the needs, people agreed. . . . Part of me wonders, "Is this really what *I* did?" Not really. Did I get the buy-in initially? Yes. I haven't done all the muscle work, but I guess we had a culture in my school that allowed this to go forth in the way it needed to. I don't feel like I can take all the credit for it, though.

We encourage collaboration with others to achieve a greater level of commitment within the school, to boost implementation, and to distribute leadership. We did not anticipate that, for some, this might take some of the gratification out of the school improvement effort.

Summary

Each of the case stories presented here demonstrates how students started with specific instructional problems and subsequently set about to resolve the problems in deliberate ways. All were ultimately successful in focusing their projects on important instructional issues in their schools, even though the specific foci

are different. The uniqueness of their experiences in designing and implementing their school improvement projects (i.e., no other course work they ever had made similar demands) suggests by itself that engagement with their SIPs influenced the manner in which they learned about school leadership. Not all the lessons they learned, however, were exactly what we intended, and they were not always learned in the ways we planned.

Our first research question asks if candidates thoroughly analyzed student achievement data. Our answer is yes and no. Yes, in the sense that each of these three students worked with student data, but not necessarily before they began the process of action planning. Both Nate and Sally had preconceived notions of how to resolve the problems they identified and were reluctant to let go of these. Yet both found value in examining student achievement data. Nate was able to articulate a clearer rationale for tracking achievement of specific skills when he could tie this to instruction better focused on students' specific needs. Sally had a strong hunch that portfolios were helping her students to achieve, but she saw after she started implementation that she could have made a more persuasive case had she collected baseline achievement information. If Sally bridges over into no in answer to our first research question, then Anna appears to be stationed on the no side. Her issue was student behavior and she linked this to achievement as a *post facto* logic of action.

Nate was the most articulate about his use of research to understand the nature of his problem and to be persuasive with peers and administrators. Sally used research to support her rationale behind her choice of portfolios as a learning tool, but she did not discuss this thoroughly in her interview. Anna appears to be more focused on the mechanics of making PBS function well in her school site, with research far in the background. Our answer to the second research question, then, is that students may be using research in ways that are valuable to them, but only Nate expresses it in a manner that parallels how we intend to teach its use.

Question 3 is the hardest to answer without direct observations of our students' leadership behaviors. Using research to understand problems clearly and to help with the formulation of action plans is the most important principle embedded in the course. As indicated previously, we are seeing that students behave somewhat inconsistently in their use of research. A related principle is maintaining an inquiry stance. We are still evolving in that regard. Approaching problems with preconceived solutions is a deeply ingrained behavior not only in our students, but also in most of the people around them in their school districts. Using Research to Lead School Improvement still has some distance to travel in terms of bringing students around to clear problem articulation prior to crafting solutions. The core principle of collaboration appears to be the area in which students behave most consistently with course principles. We learned from all three participants that collaboration was central to the design and implementation of their SIPs. Anna's concern that the project may not really "belong" to her and

Sally's hard lesson when she changed teams are evidence that students come to value collaboration in the school improvement experience. All three participants described episodes of distributed leadership without naming it as such.

Using Research to Lead School Improvement appears to be on the right path, but the three candidates participating in this study demonstrate that transfer of what is taught in class to the real world settings of their schools is not easily accomplished.

Discussion

All three candidates in the case examples encountered unexpected hurdles and roadblocks and are typical of students in the Education Leadership Program generally. Handling these difficulties were tests of their emerging leadership skills and knowledge and were thus learning experiences in and of themselves. In general, candidate success with SIPs is very much dependent on the level of administrative support they receive coupled with the student's own resourcefulness and persuasiveness.

Feedback from candidates involved in the initial implementation of these experiences reveals the richness of the performance-based experience. They have engaged in a systematic planning process, and thus challenged their own assumptions about their schools' needs and the processes associated with school change, and candidates have negotiated the puzzles and ambiguities associated with *implementation* of change. Across the Education Leadership Program, there are a variety of experiences—projects that were so successful they were featured in local newspapers or district newsletters; projects that resulted in institutionalized changes and are being replicated in other schools; and also some that have essentially stalled.

Across the three brief cases presented, the most prominent theme is that change in schools is messy and being a facilitator of change is difficult. Nate appears to have had the smoothest ride as he implemented the online tracking system for student achievement of career-based competencies. It is important to recognize, however, that he had substantial political backing from the state, which undoubtedly helped his project to be more popular with his superintendent and his principal. Few other students find themselves in that sort of enviable position. Sally and Anna are more typical, fighting for attention and sufficient support to launch their projects, let alone sustain them. The authenticity of the experience was brought home by the fact that as leaders of their projects, it was candidates' responsibility to work through such things—to adjust plans, procure resources, and influence and motivate. In short, experiential learning prompted them to come to terms with the complexity of the role of instructional leader.

Among other things, students' assumptions about collaboration were challenged as they confronted the discomfort of asking other teachers to learn to do new things or change their teaching practices. They learned that resistance to

change can be both an overt and a covert reality that requires leaders to exert influence in a variety of ways. As change agents without administrative authority, they had to confront their assumptions about empowerment and notions of "who's in charge." They experienced the full meaning of "politics" in leadership, including coalition building, mobilizing support, and resolving conflict by balancing participants' interests. Moreover, our students reported seeing a fuller range of what leaders have to do to be successful agents of change, including the myriad ways they mobilize power to influence structural and human resource allocations within schools.

Not all of the feedback we receive from candidates is positive. Using Research to Lead School Improvement is perceived as onerous, demanding a great deal of students, certainly more than they are accustomed to given their previous experiences. Likewise, implementing the school improvement project in the internship creates angst for some students, and such projects are apt to require more involved supervision from the university and the school site (Rodrick & Dickmeyer, 2002). Some candidates question the authenticity of the performance-based activities ("we don't see our principals spending a lot of time reading the research literature," "our school improvement projects are handed down to us"), and some students have difficulty engaging leaders in their schools in discussions about how they might help in leading a school improvement project.

Importance of the Study

Forsyth and Murphy (1999) have identified two forms of knowledge that are involved in leadership preparation—technical and practical—and argue that professors have a legitimate interest in ensuring that both components are included within the curriculum. They assert that historically a pendulum effect has occurred as programs have responded to concerns and criticisms, and note that "extreme imbalance has tended to promote correction" (p. 257). Our effort to teach research to support practical, instructional improvement addresses the challenge for leadership preparation programs to maintain an appropriate balance of both technical and practical knowledge.

Leadership preparation programs have been admonished for years to embed more authentic leadership experiences into their course work, and to strengthen internships to better reflect the variety of challenges aspirants will face when they become administrative leaders. A major theme of the Learning and Teaching in Educational Leadership SIG of the American Educational Research Association involves understanding ways programs can respond to these leadership development needs. Challenges include finding time, scaffolding learning experiences to meet the requirements associated with all of the standards students are expected to master, and maintaining the support of school system partners.

Our experience suggests that marrying together coursework on learning how to engage in, read, understand, and use research with field experiences in

leading school change has the practical significance of giving students the opportunity to practice and reflect on making change for instructional improvement. This study and others like it will help all to understand which means of teaching instructional leadership appear to be most effective for preparing school leaders capable of understanding research and using it to enhance student learning.

Research on effective education leadership programs suggests that many have "signature pedagogies" (Lapointe, Meyerson, & Darling-Hammond, 2006); perhaps the work described in this paper will take on this kind of status within our program. In an earlier paper (Bauer & Brazer, 2006) we suggested that many of the answers to the puzzles associated with leadership program redesign are less important than the dialogue we share as faculty with each other and our district partners. Through our students' school improvement projects, we have enriched this dialogue within our own faculty and with educators throughout the region we serve. As a result, we may have stumbled onto a framework that serves to both prepare high-quality leaders and provide an engine of improvement for local schools. We have yet to discover all of the kinks in curriculum, but we have made many improvements over the past 4 years. For the present, we are eager to expand the dialogue, and welcome the reader's ideas and feedback on this work.

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