Fostering Beginning Teacher Growth through Action Research

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Abstract: In an effort to support beginning teachers in professional development schools (PDS) to cultivate helpful, substantive school-university collaborations and promote student learning, three faculty-in-residence collaborated with three in-service teachers at three different PDSs sites to conduct action research. This article describes the action research projects, which included implementing departmentalized teaching across a third grade team, increasing student motivation in a seventh grade band class, and reducing test anxiety in a tenth grade social studies class. Obstacles faced and recommendations for mediating the challenges of action research are also discussed.

KEYWORDS: *professional development school, action research, school-university collaboration, faculty-in-residence, beginning teachers*

NAPDS NINE ESSENTIALS ADDRESSED:
3. Ongoing and reciprocal professional development for all participants guided by need
4. A shared commitment to innovative and reflective practice by all participants
5. Engagement in and public sharing of the results of deliberate investigations of practice by respective participants

Teachers are currently experiencing high levels of stress and increasing demands on their time. Adding to these stressors are expectations for teachers in professional development schools (PDS) to work with pre-service teachers who are learning how to enact the tasks of teaching that will be required of them upon program completion. To counter these pressures and support beginning teachers in PDSs while normalizing the enactment of unique and substantive school-university collaborations, university faculty assigned to the PDSs partnered with beginning teachers to conduct action research. This opportunity enabled teachers to develop teacher leadership skills by participating in professional growth and inquiry without being experts at the research process itself. Faculty and teacher partners collaborated to identify a challenge to student learning, cull research-based strategies to address it, document the implementation process, and analyze data to assess the efficacy of the enacted approach. In this context, beginning teachers

learned how to conduct action research as part of low-risk, collaborative partnership. Much like lesson planning, engaging in these processes helps teachers develop patterns of action and thought that then become more of a "habit" and less of a time-intensive practice (Wickstrom, et al., 2018).

Description of the PDS and School-University Partnership

The Winthrop University-School Partnership Network (WUSPN) began in 2009 as a shared vision among school, district, and university faculty. Today, the partnership represents nine school districts, three educator preparation colleges, fifty individual schools, and hundreds of teachers. Each participant in the Network - district, school, and teacher - has a mission that differs according to specific contextual factors, thus affording the partnership wide-ranging perspectives, needs, and inputs. While celebrating each partner's strengths and contributions, we maintain a common WUSPN purpose and shared vision of simultaneous renewal and support of P-16 (preschool through college) education, practicing educators, and educator preparation. To fulfill this mission, network partners collaborate to meet four specific goals: (1) Improve P-12 student learning; (2) Improve professional learning for district and university faculty and teacher candidates; (3) Strengthen pre-service teacher preparation; and (4) Increase support for new teachers and leaders.

The WUSPN has a unique structure offering simultaneous renewal for schools and individuals. Professional development schools (PDS) make up one part of the partnership. PDS sites engage in unique and intense school-university collaboration through action research and inquiry projects, and host teacher candidates for field experiences and year-long internships. Each PDS has a significant university presence with a Winthrop faculty-in-residence (WFIR) to support faculty, pre-service teacher candidates, and practicing teachers. With a dedicated faculty member collaborating from inception, PDS sites work to solve problems and find creative solutions that can be shared among WUSPN partners.

In spring of 2019, three beginning teachers in PDSs collaborated with university faculty in individual action research projects. Teachers were identified based upon their interest in gaining skills with action research for the purpose of improving student growth and development. The authors collaborated with Winthrop University teacher education graduates in their first four years of teaching, which allowed us to simultaneously consider teacher education program impact (e.g., curriculum changes) and facilitate teacher leadership.

The projects included an investigation of third grade departmentalization, increasing middle school student motivation in band class, and reducing test anxiety in high school students. This article describes each of the three action research projects. Obstacles faced and recommendations for mediating the challenges of action research are also discussed.

Literature Review

Beginning Teacher Support

Research suggests that problem-driven and people-driven support are the most effective types of mentoring programs for new teachers. Problem-driven support consists of "mentoring structures and activities linked to specific challenges that early-career educators encounter in the

classroom" whereas people-driven support includes mentors supporting "teachers' entry into professional communities" (SREB, 2018, p. 1). Ginnis, Heirdsfield, Atweh, & Watters (2001) identified several common activities that promote teachers' professional growth, including a focus on practical problems, reflection on teaching practices, and inquiry. The authors noted that working with beginning teachers to conduct participatory action research was a successful way to promote professional growth. Likewise, Hunzicker (2012) found that in-service teachers' exposure to research-based practices and participation in action research had a positive impact on their development as teacher leaders. Working with teachers on shared action research expands each educator's role, allowing for professional growth and development in teaching practices. In this way, the notion of university research transforms into a collaborative process that benefits all parties. The result is greater teacher efficacy and increased student achievement (Stevens, 1999; Martin, Snow, & Torrez, 2011).

Relationship Building

School-university partnerships continue to provide opportunities for positive outcomes for K-12 students, pre-service and in-service teachers, and university faculty. Although the potential for a successful partnership is transformative, the practical issues of interpersonal relationships and complex organizational structures make for a difficult path to success. The differences between a school setting and a university setting include work tempo, focus, reward, and power. These characteristics create challenges for school-university partnerships that often result in miscommunications, varied perceptions, and hidden barriers (Stevens, 1999).

To move past these difficulties, university teacher educators work to establish partnerships that support teacher development and, ultimately, student achievement. The university teacher educator plays a critical role in building a successful partnership by becoming a supportive member of the school who interacts and facilitates collaborative self-studies while recognizing the complex ecologies of a school setting. Embracing the ambiguity and tensions of this role assists partnerships in moving from cooperating relationships to collaborating ones (Martin et al., 2011). In establishing these effective relationships, considerations regarding how to collaborate authentically and in a partnership void of unequal power must be addressed. Authentic collaboration requires parties to acknowledge, consider, and overcome their stereotypes and misconceptions. Concurrently, university faculty-in-residence understand that relationship building is critical, and dedicate time, work to develop trust, and project a willingness to accept constructive criticism. In addition, the WFIR seeks to empower the teachers with whom they collaborate so they can share in ownership and control. This effective distribution of power encourages equitable partners (Easley, Henning, & Bradley, 2003).

Bronkhorst, et al. (2013) suggest one way to develop a collaborative partnership is to engage in "formative intervention" research in which university researchers' work with teachers to conduct research on real-world teaching problems. The intervention is deemed formative because it occurs during the normal day-to-day teaching practices and can be altered extemporaneously if necessary. The authors contend that the ability of the teacher to deviate from an original intervention design encourages the teacher to develop a sense of agency that will carry over into other areas of teaching. In addition, teachers' data analysis skills are enhanced because they become more adept at discerning which contextual variables affected the efficacy of their

intervention. Research indicates that such an integrated research approach leads teachers to feel that they are part of a collaborative effort rather than "being researched" from the outside (Bronkhorst, et al.).

Action Research Plan

WFIRs collaborated with recent Winthrop University (WU) graduates in established PDSs on action research projects. The projects were designed to devise and assess the efficacy of approaches used to improve K-12 student learning and to provide authentic, job-embedded professional development for educators. Three WFIRs identified three in-service teachers in three PDSs interested in conducting action research. The PDS sites included one elementary school, one middle school, and one high school. Additional information about each teacher and class is included in the results section. Teachers identified students' relative strengths and weaknesses in relation to specific teaching/learning challenges to determine the focus of the individual action research project. Projects included implementing departmentalized teaching across a third grade team, increasing student motivation in a seventh grade band class, and reducing test anxiety in a tenth grade social studies class.

Next, WFIRs worked with their teacher partners to cull relevant pedagogical research pertaining to the broadly defined action research questions being addressed. The WFIR and K-12 educators then discussed which pedagogical or procedural intervention(s) would be enacted. Next, they defined targets that indicated exactly what success would "look like" in a measurable way, as well as which observations, assessment measures, and/or artifacts would be used to assess students' growth. Finally, they created a preliminary protocol for analyzing and triangulating the data for use in continuous improvement. To ensure all research teams followed equivalent methodological protocols, an action research template was created in accordance with the protocols defined by Efron & Ravid (2013). Using these protocols, each action research project was completed collaboratively between WFIRs and their K-12 teacher partners.

Action Research Results

Pertinent facts regarding the settings in which these studies were conducted, the problem statements that informed the questions posed, the corresponding protocols enacted, and the results of these approaches and interventions are explicated below.

Elementary School: Third Grade Departmentalization

Setting. The elementary school is a neighborhood school comprised of approximately 650 students and 41 full time teachers in grades K-5, where more than half of students in the school (55.9%) receive free or reduced lunch. The research took place in a third grade classroom with 18 students; 9 boys and 9 girls. There were six Black, two White, and one Latino males, and three Black, three White, and three Latina females.

Problem Statement. In the previous school year, 45.9% of students met or exceeded grade level expectations on state standardized tests of achievement in math. Although this number exceeded both the state (42.6%) and district (44.6%) passing rates in math, Mr. Ford (pseudonym),

a first-year, third grade teacher, was concerned about his students' performance in math. He and the other two third grade teachers at his school presented a proposal to school administrators requesting that they be allowed to departmentalize their instruction, with each teaching a single content area to all three third grade classes. As part of the proposal, Mr. Ford would teach math.

Mr. Ford felt that the change to departmentalization would increase teacher morale and efficacy because each instructor could focus his/her lesson planning on individual areas of expertise. Additionally, Mr. Ford noted the use of common assessments, data tools, and analysis as a benefit of the departmentalized approach. Since each student in third grade would work with each teacher in third grade, the teachers would use a team approach to provide parents and caregivers with academic updates on their children.

Background. As high stakes testing measures and student performance outcomes continue to drive instruction, educators are compelled to consider methods for maximizing the time they spend preparing for and implementing quality instruction (Plank & Condliffe, 2013). Departmentalization has emerged as an increasingly viable means of providing quality instruction to a wider contingent of students in elementary schools (Gewertz, 2014). Departmentalization involves a team approach in which teachers specialize in one content area and focus solely on teaching that subject to a larger group of students within the grade level or school (Parker, Rakes, & Arndt, 2017). Research indicates that elementary teachers who participate in departmentalization report high levels of satisfaction related to lesson planning and instruction (Strohl et al., 2014). Critics of this approach cite the lack of attention given to the whole child and the (possible) attenuation of organically developing the positive student-teacher relationships that often occur in self-contained elementary classrooms (McGrath & Rust, 2002).

Implementation. In January of 2019, the third grade team was granted permission to begin the departmentalization approach. They developed a daily and a departmentalization schedule, which provided students with frequent breaks and access to varied instructional techniques (see Tables 1 and 2).

	Mrs. Jones' Homeroom	Mrs. Williams' Homeroom	Mr. Ford's Homeroom
7:30 – 7:45	Morning Routines	Morning Routines	Morning Routines
7:45 – 8:15	Schoolwide SOAR	Schoolwide SOAR	Schoolwide SOAR
8:15 – 9:10	Guided Reading/Prep/IDR	Guided Reading/Prep/IDR	Guided Reading/Prep/IDR
9:10 – 9:15	Transition Time	Transition Time	Transition Time
9:15 – 10:15	Content Session 1 (w/ AJ)	Content Session 1 (w/ TS)	Content Session 1 (w/ HS)
10:15 – 11:00	Special Areas	Special Areas	Special Areas
11:00 – 11:10	Transition Time	Transition Time	Transition Time
11:10 – 12:10	Content Session 2 (w/ TS)	Content Session 2 (w/HS)	Content Session 2 (w/ AJ)
12:10 – 12:15	Transition Time	Transition Time	Transition Time
12:15 – 12:45	Lunch	Lunch	Lunch
12:45 – 1:10	Recess and Restroom	Recess and Restroom	Recess and Restroom
1:10 – 2:10	Content Session 3 (w/ HS)	Content Session 3 (w/ AJ)	Content Session 3 (w/ TS)
2:10 – 2:20	Wrap Up and Dismissal	Wrap Up and Dismissal	Wrap Up and Dismissal

Table 1: Daily Schedule

Mrs. Jones' Content Session (students w/ Mrs. Jones)	Mrs. Williams' Content Session (students w/ Mrs. Williams)	Mr. Ford's Content Session (students w/ Mr. Ford)
Reading Mini Lesson (15 min.) Writer's Workshop (40 min.) Wrap Up / Sharing (5 min.)	Science/Social Studies (30 min.) Research/Content Writing (25 min.) Wrap Up/Sharing (5 min.)	Math Mini Lesson (20 min.) Stations/Guided Math (30 min.) Wrap Up/Math Talk (10 min.)

Table 2: Departmentalization Schedule

Each teacher spent the first two weeks establishing classroom rules and procedures with students from the other two classrooms. Admittedly, this process took time and patience, as the format was unfamiliar to the children. By the third week of the process, the children were comfortable with the new schedule and reported high levels of enjoyment as indicated by their responses to informal questioning.

At the beginning of the implementation period, Mr. Ford administered the Measure of Academic Progress (MAP), a computerized individually adapted test, to all students in his class (see Figure 1). In terms of overall performance, eight students (44%) scored in the lowest percentile on the assessment (<21%), four students (22%) scored in the Low Average percentile (21-40%), two students (11%) scored in the Average percentile and four students (22%) scored in the High Average percentile. None of the students score in the High percentile (>80%).

	Lo %ile < 21		LoAvg %ile 21-40		Avg %ile 41-60		HiAvg %ile 61-80		Hi %ile > 80	
Overall Performance	count	%	count	%	count	%	count	%	count	%
Growth: Math 2-5 SC 2015 / SC College- and Career-Ready Mathematics Standards: 2015	8	44%	4	22%	2	11%	4	22%	0	0%
Goal Area										
Geometry	6	33%	5	28%	3	17%	4	22%	0	0%
Number Sense and Operations	8	44%	2	11%	6	33%	1	6%	1	6%
Algebraic Thinking and Operations	8	44%	2	11%	4	22%	4	22%	0	0%
Measurement and Data Analysis	8	44%	4	22%	2	11%	4	22%	0	0%

Figure 1: Winter MAP Scores

Analysis of student performance on specific math content indicated that a majority of the students (50%) performed in the Low or Low Average percentile on Geometry tasks; 55% of students performed in the Low or Low Average percentile on tasks related to Number Sense and Operations; and, 63% to 67% of the students performed in the Low or Low Average percentile on Algebraic Thinking and Measurement/Data Analysis, respectively.

Assessment. Following the intervention, there was little change noted in student performance relative to the MAP scores (see Figure 2). The number of students performing in the Low, Low Average, and Average percentiles remained the same. One student moved from the High Average percentile to the High percentile. The changes in relation to each of the math strands were minimal as well.

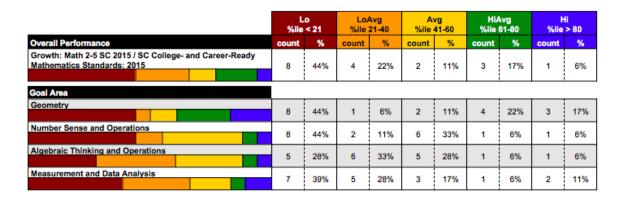|	Lo %ile < 21		LoAvg %ile 21-40		Avg %ile 41-60		HiAvg %ile 61-80		Hi %ile > 80	
	count	%	count	%	count	%	count	%	count	%
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Growth: Math 2-5 SC 2015 / SC College- and Career-Ready Mathematics Standards: 2015	8	44%	4	22%	2	11%	3	17%	1	6%
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Number Sense and Operations	8	44%	2	11%	6	33%	1	6%	1	6%
Algebraic Thinking and Operations	5	28%	6	33%	5	28%	1	6%	1	6%
Measurement and Data Analysis	7	39%	5	28%	3	17%	1	6%	2	11%

Figure 2: Spring MAP Scores

Despite the lack of change in student performance on the MAP assessment, Mr. Ford was pleased with the outcomes related to student satisfaction, classroom community, student-teacher rapport, and teacher morale. Additionally, the teachers were successful in meeting their commitments to the departmentalization intervention. As a beginning teacher, it was rewarding for Mr. Ford to problematize academic concerns in the classroom and develop realistic data-driven solutions. Having the autonomy to make programmatic decisions reaffirmed the teachers' efficacy and administrators' confidence in his instructional decision-making.

Middle School: Student Motivation

Setting. The middle school action research project took place in a seventh and eighth grade school with almost 750 students. It is a Title I school, located in a rural community, where band classes are divided by grade level and instrumentation. The action research was conducted specifically with seventh grade students in their second year of band. The band director had taught for five years. The goal of the musical performance project was to increase student participation in music festival performance. In previous years, the teacher had a low turnout of students who were willing to perform at the music festival. By incorporating a motivational incentive, the teacher's goal was to increase the number of students performing at the festival.

Problem Statement. Research on student motivation for middle school students in a band classroom indicates that students who believe they are efficacious in music are more motivated to learn (Cogdill, 2104). Self-efficacy in music is defined as "beliefs about one's ability to accomplish musical goals" (Cogdill, 2014, p. 2). In addition, students' motivation to learn is associated with whether they have a growth or fixed mindset. Students with a growth mindset believe that with effort comes improved musical ability (Woolfolk, 2019). Consequently, students are more likely to put forth sustained effort. Intrinsic motivation to learn is also informed by self-determination theory, which indicates that students who feel competent, sufficiently autonomous, and a sense of relatedness are more apt to engage and persist in their learning (Deci & Ryan, 2000).

Given these motivational theories, the research question asked, what strategies will motivate students to engage in class and rehearsal and encourage students to take ownership of

their musical development? As essential skills for musical performers' success, motivation and ownership of the learning experience were the foci.

Implementation. The action research was conducted over a six-week period, during which time the music teacher enacted motivational strategies to provide his students with more choices, greater levels of autonomy, and a stronger sense of relatedness. For example, students were permitted to choose their own music to perform, their partners, and the setting of their performance. The teacher granted greater autonomy by allowing students to create their practice schedule with their chosen piece. Students' sense of relatedness was enhanced by allowing them to identify and work with musical partners who complemented their ability.

Students completed a pre- and post-survey to determine their levels of motivation and attitudes toward the class, the teacher, practicing time, performances, and their own confidence and ability. Students also completed a benchmark self-evaluation and a benchmark peer evaluation. The teacher used these data to monitor and adjust strategies throughout the unit. At the end of the unit, students completed a self-reflection. Observations and interviews were conducted by the WFIR.

Assessment/ Reflection. As noted above, the students were assessed in several ways to determine the degree to which their motivational levels increased, and if so, the impact on musical performance. Students' motivational levels were measured by a survey with a 5-point Likert scale, and included statements such as: I believe I can learn in this classroom, Learning is exciting in this class, and I am motivated to get better at playing my instrument. After participating in the intervention, average scores on each item became more positive, indicating increases in student motivation.

The benchmark self-evaluations and peer evaluations showed motivational gains as well. The self-evaluations included questions about difficult parts of the music selection, preparedness, and goals for improvement. The peer evaluation asked if the partner kept a steady tempo, appeared confident, and recovered quickly from mistakes. The final self-reflection allowed the students to consider their progress during the unit and reflect on improvements for the future. Notable comments included, "Teamwork made a difference," "I feel great. I gave it my all and put in effort," and "My favorite part was becoming closer to some of the people in our band and building new bonds."

Student observations and interviews were conducted during the third and fourth weeks of the unit. Students were focused and engaged during the observations. When interviewed, students said they appreciated the freedom to choose their musical piece and their partner. Several students mentioned that the task of creating their own practice schedule provided a sense of ownership. One student said, "This is my own responsibility to learn this piece."

When interviewing the teacher during the middle of the unit and at the end of the unit, the teacher repeatedly commented, "Sometimes it's about the process and not just the product." Giving students choice in the project encouraged high motivation and, therefore, high achievement. In referring to levels of motivation, the teacher said, "I can tell there is a difference. The motivation and excitement from this project has transferred into other activities and performances." He noted the unique success of teaching the unit with the inclusion of practices used to foster student motivation:

I have done this project a number of times, but by shifting my focus to the journey rather than the destination, I could see a difference in how students approached their learning.

This is the first time I have ever had this many students excited to work on this project. Students could choose to perform at the musical festival or participate in a class performance. Of 57 students, 36 (63%) chose to perform at the music festival. The remaining 21 students (37%) performed in class.

The focus of this project was on developing young musicians; not just performing the musical piece. The unit was used to develop the habits and practices of good musicians through increased student motivation. By giving students autonomy and choice that related to their own learning, they were more motivated, which likely resulted in feeling greater musical efficacy. Developing students' intrinsic motivation, important concepts of discipline, and work ethic will likely prove beneficial in other areas, such as academic study and relevant life skills.

High School: Test Anxiety

Setting. The high school action research project took place in a suburban high school with approximately 1,400 students where the student population is 57% minority and 49% economically disadvantaged and the graduation rate is 84%. The action research took place in a tenth grade honors government/economics class with 34 students.

Problem Statement. Through observation, the teacher noticed that students appeared highly anxious regarding classroom tests. She also wanted to prepare students for the many high-stakes tests they would be required to take in high school. Research suggests that providing practice tests (Salend, 2011) and teaching test-taking skills (Supon, 2004) can reduce test anxiety in students.

Intervention. Over 12 weeks, the teacher taught students test-taking strategies; gave students frequent quizzes so they could practice test-taking strategies and become more comfortable with testing formats and introduced humorous/calming elements to the test-taking environment.

Assessment. Before and after the interventions, students completed a Test Anxiety Questionnaire (Nist & Diehl, 1990) consisting of ten statements. Students were asked to think about past testing experiences and rate their frequency of specific feelings and behaviors. Sample statements included, I feel sick to my stomach before a test, my mind goes blank during a test, and I am nervous before a test. Likert scale responses included 1=Never, 2=Rarely, 3=Half-time, 4=Often, and 5=Always. Possible scores ranged from 10 to 50. A low score (10-19 points) indicates that a student does not suffer from text anxiety. Extremely low scores (close to 10), indicate that a student may actually need more anxiety to be motivated to study. Scores between 20 and 35 indicate that a student exhibits some characteristics of test anxiety. This level of stress and tension is considered healthy. Scores over 35 suggest an unhealthy level of test anxiety. Complete pre and post data were collected from 26 of the 34 students. Student scores on the pre-test ranged from 10 to 49 with an average score of 29.7. Five students scored in the low range, 13 in the healthy range, and eight in the unhealthy range. Student scores on the post-assessment ranged from 10 to 50, with an average score of 24.25. Eleven students scored in the low range, 11 students scored in the healthy range, and 4 students scored in the unhealthy range. Table 3 displays the pre and post-test anxiety questionnaire results.

	Low Anxiety (10 to 19)	Healthy Anxiety (20-35)	Unhealthy Anxiety (>35)
Pre-test	5	13	8
Post-Test	11	11	4

Table 3: Test Anxiety Pre and Post Test Results

From the pre- to the post-assessment, student anxiety scores dropped slightly, by 4.82 points. More importantly, fewer students scored at the unhealthy level of stress on the post-assessment, dropping from eight students to four. Of the eight students who scored at the unhealthy anxiety level on the pre-test, three remained at the unhealthy level on the post-assessment, four moved to the healthy category, and one moved to the low stress level. These results suggest that teaching students test-taking strategies and introducing stress management techniques may help decrease student test anxiety levels.

Discussion

Enacting these action research projects was far more complex than the methodology and results, described above, suggest. In-service teachers' stressors, their responsivity to emergent concerns, and the feasibility of implementing new strategies and systematically assessing their efficacy make partnering in action research a complex interpersonal endeavor that often progresses in fits and starts. In addition, university faculty members – many of whom formerly taught these in-service teachers – are often viewed as authority figures by teachers, making perceived differences in power salient dynamics within the context of this process (Elliot, 1994). These complexities are described in further detail below. Also described are techniques that faculty-in-residence can use to mitigate these obstacles.

First, conducting action research can be appealing to many in-service teachers, and they will indicate this in initial conversations. However, there is an understandable difference between aspiring to do something and actually commencing a small-scale research project – particularly in a context of changing professional priorities. For example, one in-service teacher expressed concern regarding her students' difficulty decoding words, as it impeded their ability to comprehend test questions. The faculty-in-residence suggested using an open-source technology that read highlighted text to students aloud. Although this teacher found the suggestion helpful, she quickly pivoted towards a newly emergent concern: students' levels of test anxiety (Hakanen, Bakker, & Schaufeli, 2006). Thus, concerns that emerge for teachers on a regular basis, as well as how these concerns impact when they are able to implement specific interventions, make conducting collaborative action research a somewhat challenging task.

Second, identifying a problem to solve as an in-service teacher necessitates admitting that you neither have all the answers nor are able to control all changes among students. Discussing this openly can feel like risky business in the accountability-driven culture imposed upon schools, and, by proxy, teachers (Gill & Lerner, 2017; Dorman, 2003). In addition, as a mechanism for remaining in compliance and maintaining high standards, many administrators determine in-service teachers need to learn. This purportedly ensures that K-12 educators are learning the tasks of teaching that will foster their students' success (Shulman, 1986). Although that may be true,

this also creates a context of continuous improvement using a top-down approach. Action research, on the other hand, encourages inquiry from the bottom up, and necessitates honestly talking about the complexities of the classroom (Elliot, 1994). As such, these complexities do not remain safely cloaked in compliance metrics, such as K-12 students' performance on standardized tests (Gill & Lerner, 2017).

Third, many teachers are becoming increasingly tired and taxed (Vandenberghe & Huberman, 1999; Bakker & Schaufeli, 2000; Maslach, Schaufeli & Leiter, 2001). They are frequently required to engage in standardized test preparation, while teaching a vast spectrum of curricula in a relatively short time span. These requirements, as well as meeting the needs of students with increasing affective and social issues, make teaching a demanding career – precluding teachers from having the "bandwidth" to take on action research if it appears to be an added professional task (Browers & Tomic, 2000; Mitchell, Bradshaw, & Leaf, 2010; Evers, Tomic, & Brouwers, 2004; Isenbarger & Zembylas, 2006).

Fourth, many teachers graduate from teacher preparation programs with minimal data literacy, leaving a wide gap between their familiarity with, and understanding of, action research (Mandinach & Gummer, 2013; Mandinach, Gummer, & Muller, 2011). Thus, the benefits and requirements of action research remain somewhat unclear to in-service teachers, while the workload can seem overburdening. If the cost-benefit ratio of participating, particularly in partnership with a person with whom there is a power differential, is tipped in favor of costs, then it is no wonder that in-service teachers are hesitant to engage in conducting action research.

Implications for Practice/Next Steps

As noted previously, the faculty-in-residence who authored this paper learned how to mitigate some of these obstacles using a variety of techniques. One method, in addition to spending time building trusting relationships, was to make the action research methodology an organic, non-demanding exercise. For example, when one in-service teacher noted her interest in assessing methods used to attenuate students' test anxiety, the faculty-in-residence found an assessment measure that day and provided the teacher with copies immediately thereafter. Another method, used in the context of relationship-building and establishing trust, was to ask the in-service teacher to call the faculty-in-residence by her first name. This was emblematic of creating an equal partnership, not a relationship between an authority and his/her subordinate (Gascoigne & Wolfendale, 1995). Faculty-in-residence also mapped out the action research process for simplicity and reiterated the benefits of thinking about discrete challenges and ways to address them (Schwarzer & Hallum, 2008). In fact, they couched these practices as part of their "tasks of teaching" – not add-ons to an already very busy day. These practical and interpersonal methods, guided by inter-subjectivity (Prepin & Pelachaud, 2013), led many in-service teachers to endorse the benefits of working with these faculty-in-residence. These endorsements "spread" to other teachers interested in gaining support through learning, relationship building, and inquiry. Research indicates that teacher leadership is a developmental process and that teachers move into both formal and informal leadership roles over time (Hunzicker, 2017). By participating in action research with university faculty, these three teachers have begun their journey to teacher leader.

Limitations

It is hard to know whether the results from, and implications of, these action research projects are generalizable to other contexts and partnerships. The quality of university-school partnerships, the duration of time faculty-in-residence have been immersed in local schools, the challenges faced by the teachers therein, and the degree of "safety" and administrative support in-service educators receive are all likely to influence the degree to which these partnerships are robust, fruitful, and potentially normative facets of a K-12 environment. However, pervasive themes including ever-evolving issues in the classroom, feelings of trepidation regarding whether it is "safe" to discuss these challenges, power differentials, and the taxing nature of teaching appear characteristic of most educators with wide applicability throughout the United States (Chang, 2009).

Conclusion

The authors assert that the techniques described in this article, used to mitigate impediments to commencing action research, are likely to be not only helpful practices, but necessary pre-requisites to forming strong partnerships. They recommend implementing these strategies and assessing efficacy in dyads (teacher and faculty-in-residence), as well as within the broader school-based ecosystem, where reciprocally beneficial partnerships can have reverberating effects. These data can, and should, be collected and analyzed to inform "next steps" within this important work.

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