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Addressing the Research/Practice Divide in Teacher Education

Ryan Flessner

Abstract

Educational scholars often describe a research/practice divide. Similarly, students in teacher education programs often struggle to navigate the differences between university coursework and expectations they face in field-based placements. This self-study analyzes one researcher's attempt to address the research/practice divide from the position of a teacher educator. Teaching in a university-based mathematics methods course during the academic year and an elementary classroom during the summer recess provided opportunities to make connections between research and practice. This article examines the effects this study had on the researcher's instruction at the university level. Specifically, the article suggests ways for teacher educators to reconnect with classroom practice in an effort to remain relevant in the quickly changing world of P–12 education. In addition, the study suggests ways for teacher education programs to connect methods courses to authentic field-based experiences to help future teachers make connections between research and practice.

As an instructor of elementary methods courses, it is my hope that the teachers-to-be with whom I work will have the opportunity to implement different types of instruction from those typically experienced by young children. Yet, in doing so, teacher educators (myself included) must address the divide between research and practice that permeates much of the literature and discourse related to education (Loughran, 2007). Managing this divide presents a challenge for teacher educators. In the words of Grossman, McDonald, Hammerness, and Ronfeldt (2008),

> Teacher educators can rail against the limitations of [traditional or mandated curricula], but they have a professional responsibility to ensure that novices learn to use such curricula to promote student learning, even as they work to change policy… . By choosing to ignore these expectations, we fail both the students, and the teachers who teach them. (p. 244)

To better understand the research/practice divide, I knew I needed to reconnect with classroom practice within a public school context. To do so, I decided to step away from the university context and temporarily return to elementary teaching. This self-study examines what happened when I returned to the university context after my time in an elementary classroom. Furthermore, it captures my attempts to reimagine my methods courses to answer the question of "How can we, as teacher educators, better connect the worlds of educational research and practice as we interact with pre-service teachers?"

A LOOK AT THE LITERATURE: THE RESEARCH/PRACTICE DIVIDE AND TEACHER EDUCATION

Research and writing in the field of teacher education, specifically, and educational research, more generally, abound with examples of what Honan (2007) labeled the binary of theory/ practice. Dhingra's (2004) work substantiated Honan's binary by noting the "apparent intellectual segregation of educational theory and pedagogical practice" (p. 232).

Labaree (2004) stated,

> Teachers and researchers not only find themselves in two very different institutional contexts—the public school and the university—but they also tend to carry with them sharply contrasting worldviews that arise from the distinctive problems of practice they encounter in their respective roles. (pp. 90–91)

Although some scholars have noted the importance of researchers working with classroom practitioners to "understand and draw … problems from practice and study them in practical as well as theoretically relevant ways" (Pellegrino & Goldman, 2002, p. 16), a divide between research and practice is often used as a scapegoat to maintain distance between these two worlds. For example, though acknowledging the surfeit of writings that identified a divide between research and practice, Loughran (2006) bemoaned the exaggeration of such a schism. Rather than positioning research universities and public schools antagonistically, Shulman (2004) promoted a more proactive approach by noting, "A dialectic must ensue between [research and practice] because through this alternation we begin to grasp both the potential for positive change as well as the limits of reform" (p. 266).

Teacher educators are positioned in ways that may help address the research/practice divide by working in the dialectic between research and practice through self-study research. For example, several self-study researchers documented their efforts to address the research/practice divide within their university-based teacher education programs. One such researcher, Schuck (2002), investigated her attempts to align instruction in her mathematics methods course with her beliefs about constructivist and sociocultural learning theories. In doing so, Schuck articulated tensions she experienced between the ways she hoped her preservice teachers would instruct their future students and the ways she was instructing those same preservice teachers in her own methods course. To move away from a "telling" stance that positioned her as an expert, Schuck created activities and assignments that required her preservice teachers to take more control over their learning.

Similarly, Featherstone (2007) examined her efforts to change preservice teachers' understanding of the role of the teacher. She wanted her students to understand that a teacher facilitated learning by allowing children to construct knowledge socially as opposed to the traditional expert-novice role typically embodied by teachers. Interestingly, she faced resistance from the future teachers when these ideas clashed with their conceptions of what teachers should know and do. This led her to note that in attempting to improve the classroom experiences and life chances of children by preparing qualified teachers, we missed a valuable lesson. Featherstone described an important dilemma that teacher educators must understand:

> While the impulse to improve the lives of children is surely a laudable one … our (pre-service) students have become, at least partly, a means to an end—the improved educational opportunities for their future students—rather than an end in themselves. (p. 92)

Beyond studying their own practice at the university level, some teacher educators return to public school teaching to reconnect with classroom practice. Gutstein (2006), for instance, took on the role of a middle school teacher to examine the connections between mathematics and issues of social justice. He offered his students opportunities to explore data from the community (e.g., data related to racial profiling, mortgage loans, etc.) to help them understand that mathematics plays an important role in everyday life. In addition, Gutstein systematically validated his belief that community knowledge was a powerful force in making mathematics relevant to middle school students.

In another example, Lampert (2001), a university-based teacher educator, returned to an elementary classroom to gather comprehensive data related to her planning for, implementation of, and reflection on classroom practice. By returning to a fifth-grade classroom as the lead mathematics instructor, Lampert hoped to capture more than daily interactions with children. In the past, she had asked preservice teachers to observe her in the act of teaching. Yet she realized her students could not comprehend the entirety of the task of teaching (e.g., reflecting on past experiences, systematically analyzing classroom data, planning lessons that built on students' strengths, etc.). Lampert's study, therefore, captured nuances often left unexamined. Her study remains one of the classic self-examinations in the teacher education literature.

In these final two instances, Gutstein (2006) and Lampert (2001) each crossed the boundaries between universities and public schools as they examined their own teaching practices. Lampert captured this idea of boundary crossing in noting

> I have had the benefit of being both a teacher and a researcher. … To be an effective and responsible teacher, I tried to do what I believed was right in my interactions with students and with the mathematics under study. My task as a researcher is to do the best job I can to represent the work of teaching using the extensive records of practice collected in my classroom. (p. 7)

Building on the work of self-study researchers such as Schuck (2002) and Featherstone (2007), as well as researchers such as Gutstein (2006) and Lampert (2001) who returned to the elementary classroom, the purpose of this study was to examine my instruction of preservice teachers enrolled in my mathematics methods course at the university.

SELF-STUDY METHOD

The research highlighted in this article employed a self-study methodology. As one form of practitioner inquiry (Anderson, Herr, & Nihlen, 2007), self-study relies heavily on the researcher's assumption that the self can never be separated from one's research or teaching practice (Cochran-Smith & Lytle, 2009). Like most other forms of practitioner inquiry, self-study research is conducted from an emic or insider perspective (Cochran-Smith & Lytle, 1993).

However, self-study does more than present an insider perspective. Some have referred to those who conduct practitioner inquiry as “teachers who are also researchers” (Lagemann, 2000, p. 225). From this view, any research conducted by a teaching professional could be considered practitioner inquiry—whether related to the teacher's practice or not. Self-study, though, places specific emphasis on an examination and interrogation of the self (Kitchen, 2009).

Thus, self-study allows educators to reflect systematically upon and study their practice in an effort to identify tensions or dissatisfactions (Loughran, 2002). In doing so, “We can confidently and immediately change our practices without waiting for new research from others, new professional development, or new technology” (Hamilton & Pinnegar, 2000, p. 238). Through systematic collection and analysis of classroom data, I was able to examine myself while documenting and assessing efforts to improve my instructional practices. Below, I highlight the background and context of this research as well as the ways in which systematic processes of data collection and analysis developed across the study.

Background

As a university-based instructor of elementary mathematics methods courses, I felt tension between what my colleagues and I espoused at the university and what the preservice teachers experienced in the elementary schools where they were placed for their practicum and student teaching experiences. Therefore, I felt it was necessary to return to the elementary classroom to reconnect with instruction at the P–12 level. Throughout the academic year, I was an instructor at a research university (described below). However, during the summer recess, I sought employment

as an elementary math teacher in a local summer school program. In doing so, I deliberately positioned myself in a space to reflect upon the research/practice divide.

For 2 months, I was employed by the school district that surrounded the university at which I worked. During that time, I was engaged in professional development opportunities alongside fellow elementary teachers and was the lead instructor of an elementary mathematics classroom. In that classroom, I was responsible for the instruction and assessment of third-grade mathematics, and two sets of children rotated through my classroom for 2-hour blocks of mathematics instruction.

Throughout my time in the elementary classroom, I interacted with a host of expert practitioners, collected a variety of classroom artifacts, videotaped all aspects of my teaching, and kept detailed notes and reflections—all in an effort to improve my instruction in the elementary classroom as well as at the university level. Whereas my time in the elementary classroom played a vital role in my transformation as an educator, this study took place after my time with the elementary children when I had returned to my role as a university instructor.

Context and Participants

Central University [1] (CU) was a Research I university in the midwestern United States. Approximately 2,000 students were enrolled in its School of Education (SoE) each year. Like the majority of teacher preparation programs across the United States, those enrolled in CU's SoE were predominantly White, monolingual, female students from middle-class backgrounds (Zumwalt & Craig, 2008). During the 2006 to 2007 academic year, 75.66% of undergraduates within the SoE were female, and the university classified only 8.2% of SOE students as coming from “targeted minority” [2] backgrounds.

Teaching Mathematics was the only mathematics methods course required of all students seeking certification as elementary teachers. The class, which enrolled 25 students, met once a week for 14 weeks. The 3-hour weekly meetings were typically held on campus; however, on three occasions, we visited area schools to see, firsthand, the types of mathematical instruction we were exploring in the course. In conjunction with this course, each preservice teacher completed a practicum with an experienced elementary teacher in the Edgewater Metropolitan School District (EMSD), the district in which the University was located.

Data Collection and Analysis

A variety of data was collected for the purposes of studying my teacher education practices. Throughout the study, I utilized a teacher journal to recount events that occurred, to capture my reflections on those events, and to think through the interplay between research and practice as it applied to my methods course. Student-generated data included preservice teachers’ postings to a course Website, assignments from the course, midterm and final evaluations of the course, critical feedback questionnaires, and postcourse interviews. Postings to the course Website included reactions to course readings and activities, reflections on videos that were posted online, and any other ideas the future teachers chose to publish on the site. Assignments from the course provided evidence of the students’ emerging understandings of the course content and their ability to utilize

this knowledge in practice. Midterm and final evaluations (in addition to the formal evaluations collected by the university) were conducted in an effort to gauge students' reactions to and further needs from the course. In addition to these structured evaluations, critical feedback questionnaires (CFQs) were collected at the end of each class to solicit students' responses to the day's activities. Finally, postcourse interviews were conducted with six students. Students who volunteered for these interviews were asked to reflect on the course, suggest changes that could be made, and confirm or refute preliminary findings from my initial analysis of the data.

Because of the nature of self-study research, constant movement between research and practice was necessary. Therefore, analysis of the data occurred during and after the semester in which this study took place. In analyzing the data, I utilized pattern-matching logic (Gall, Gall, & Borg, 2003) and categorical analysis (Rose & Sullivan, 1996). Pattern-matching logic was employed to predict themes I noticed as data were collected. Themes identified included "preparing for change" and "proximity to practice." Early on, I knew I would have to change the structure of my course to more fully align with the philosophies and practices that were evident in the district where my students were placed for their practicum experiences. Similarly, I worked diligently to ensure that students had multiple opportunities to engage with real teachers and real students to experience how ideas we were discussing at the university were actually playing out in real classrooms.

In addition to pattern-matching logic, I also utilized categorical analysis as unanticipated themes came to my attention. Themes identified as the study progressed included "multiple perspectives" and "common experiences." As the study unfolded and new themes were identified, I continually returned to the data, as is typical in an inquiry cycle (Kemmis & McTaggart, 1988), to verify or refute findings. Similarly, member checks (Falk & Blumenreich, 2005) were conducted through postcourse interviews to add validity to the findings.

Although several themes were identified throughout the course of the study, it was beyond the scope of this article to examine each of these themes. Therefore, I chose to examine the idea of "proximity to practice" because it highlighted many of the ways I was able to address the divide between research and practice throughout the course of the semester.

FINDINGS

To bridge the gap between research and practice in my university-based elementary mathematics methods course more effectively, I made two major changes to my instruction: (1) including several classroom visits to area schools and (2) developing a course Website containing videos of my own elementary teaching. Both changes allowed students to gain a proximity to practice that had previously been missing in my methods courses. No longer were students confined to course readings and class discussions. Classroom visits allowed students to step away from the university environment to see teaching and learning in elementary classroom settings. The course Website allowed students to view my elementary teaching, to ask questions of me as the elementary teacher (and as their university instructor), and to engage in thoughtful reflection about the teaching and learning that took place.

Classroom Visits

My choice to include classroom visits as part of my math methods course was highly influenced by my own teaching and learning. By returning to the elementary classroom, I had met many talented educators who had much to offer in terms of teacher education. Through visits to the classrooms of these educators, I felt the teachers-to-be with whom I worked would have the opportunity to see new ways of teaching and learning mathematics while also witnessing the differences in implementation styles among the various classroom practitioners.

Lampert and Ball (1998) lamented, "The traditional teacher education curriculum includes a mix of formal knowledge and firsthand experience, theory and practice divided both physically and conceptually" (p. 25). In previous semesters, the preservice teachers in my courses had noted this divide. Because the practicum placement associated with my methods course was organized and supervised by someone other than myself, there was little alignment between what we were discussing in the methods course at the university and what the future teachers were observing in their practicum placements. To help bridge this divide, I was very intentional in the classrooms I chose to use as site visits. Here, I attempted to systematically connect the research that students were studying at the university with real-world teachers and classrooms.

In my teacher journal, I documented my justifications for one of our site visits:

> Today's class was held at a local elementary school… . By taking the class to the school, I was hoping that the students would see that this type of teaching really does happen—it is possible in real classrooms with real children. (Teacher journal, October 1)

Data collected during the visit showed that the preservice teachers understood the purposes of these excursions and appreciated the opportunities: "[I was interested in] observing … a classroom setting [because] it provided me with a concrete example of what I have read & learned about" (Anonymous CFQ, October 1)and "[I enjoyed] hearing the students' explanations/thinking as they solved problems—it is so awesome to hear the way they think and the cool strategies they use" (Anonymous CFQ, October 1).

For another school visit, I asked students to observe the classroom instruction and then ask the elementary children questions about their mathematical thinking. In doing so, I hoped the preservice teachers would begin to understand that there are many ways to think about the teaching and learning of mathematics. I knew that the teachers we were visiting allowed students to think flexibly about the connections they were making in mathematics, to develop their own personal strategies for solving problems, and to communicate their understandings with others. This visit opened the eyes of many preservice teachers. For example, Carrie noted,

> [The] visit where we did the [math] interviews, that kind of blew my mind. … I wasn't expecting this little kid to be able to answer [my questions]. … When I looked back at it, I would not have been able to come up with the different things that they came up with. I guess I wasn't expecting to see the level of understanding that those kids showed us. (Postcourse Interview, May 5)

During our final observation of the semester, three EMSD third-grade teachers agreed to teach the same lesson. They used the same opening activity, the same problems, and the same game as they

instructed their elementary students. The preservice teachers were encouraged to circulate through all three rooms to see the ways in which each teacher implemented the lesson. Methods students' responses to this visit were tremendously positive: "I loved seeing the different ways three teachers taught the same lesson. It gave me a lot to think about and reflect on" (Anonymous CFQ, November 5) and "I especially liked the [final school] visit. There were so many different styles to observe. [It] emphasized that there isn't a script for [teaching] math—half of the challenge will be to make it my own" (Carrie, Final Evaluation, December 10).

Kaye spoke about the power of the classroom visits during her postcourse interview:

> You showed us that this isn't just going on at the university. I think us growing up in a traditional math sense makes us think "Well, this is B. S., this isn't gonna work. What are you talking about?" Whereas, when you get all of those different people to tell us the same thing, it shows us that it *does* work, people *do* do it. It's not just coming from you. (Postcourse Interview, May 5)

Throughout the semester, the teachers-to-be validated my assumptions that spending time in real classrooms would help preservice teachers make more authentic connections between research and practice. In addition, crossing boundaries between the worlds of the university and the P–12 schools allowed me to engage in a more collaborative venture with area teachers as I attempted to improve the learning experiences of the future teachers with whom I worked.

Course Website

A second major change I made in my pedagogy was the use of a course Website. Previously, I had used a course Website for students to post weekly reading reflections; however, I felt there were other ways to use a Website to more fully engage preservice teachers in studying elementary mathematics. Because I had collected videotapes of my practice in the elementary classroom, I decided to post some of these videos for students to view. I had used videos of a variety of teachers in the past, but there always seemed to be a gap between the future teachers and the educator on the film. In posting videos of my own teaching, I was attempting to offer students access to the teacher in the video (myself) as well as to access my thinking, planning, and reflection prior to, during, and after the lesson. By simultaneously engaging in the work of a methods instructor and highlighting my role as a classroom teacher, I hoped to create an opportunity for myself to explore the research/practice divide alongside the preservice teachers.

The videos I chose were used to complement the course. With each video, I posted various artifacts from the elementary classroom. Photographs of the chart paper used during class discussions, teacher journal entries, examples of students' strategies from their math journals, and other artifacts were available for the preservice teachers to view and digest as they watched the videos. In posting these videos, I hoped to make my teaching—and my learning—transparent for the students. They could see the ways in which I implemented the ideas we were discussing in class. Norman (2007) noted, "Mining a video and crafting a conversation around it is a practice that teacher educators must develop" (p. 176). I heeded this advice as I juxtaposed these videos with the reading list and as I planned activities and discussion questions for class.

Students' responses to the videos were quite positive. The following quotes highlight basic reactions to the videos posted on the course Website:

> Watching you teach one-on-one and small group and whole group [was helpful] just to see how it really *does* work. Learning the methods, that was helpful, but to actually see you doing it, and the way you talked to the kids—that was really good. (Meredith, Postcourse Interview, May 7)

> The video was extremely helpful and is probably the most useful instruction we have seen in the school of ed so far. I am interested in watching videos of your instruction … because those are real applications of what we are learning… . It is one thing to read a dialogue in a book of a student solving problems, and it's another thing to actually watch it unfold. Keep the videos coming! (Anonymous posting to course Website, September 28)

Although I appreciated the fact that the students saw value in the videos, what was even more moving for me was their willingness to offer suggestions for improving my instruction:

> When the one girl replied that she found 24 by doubling, that was great thinking and she was right, but is there then a need to relate it back to the problem to say okay … now why would doubling give us the answer? What does 12 + 12 mean … and why. (Michelle, posting to course Website, December 15)

> I think that if you had initially asked the students to solve the problems without a ratio table, it might have been easier to discover a way to make a connection between something they already knew and the idea that you can skip numbers when making a table. (Rita, posting to course Website, December 4)

These teachers-to-be—the same teachers who at the start of the term had discussed their frustrations with mathematics and their worry about having to teach students in ways that were inconsistent with their own schooling—were now willing to reflect on the videos, discuss their ideas, and even offer suggestions for improving my practice.

For me, this showed that the semester had meaning for the methods students, that they were internalizing the ideas we were discussing in class, and that they were beginning to see themselves as teachers of mathematics. Videos of classroom practice were one step removed from direct contact with children and teachers, yet they still provided a proximity to practice that had been missing from my course in previous semesters.

CONCLUSIONS

As discussed earlier, there is a divide between research and practice in the field of education. By engaging in this research project, I examined my own efforts to address this divide. Throughout the study, I modified my teaching and employed a variety of pedagogies as I attempted to answer the question of "How can we, as teacher educators, better connect the worlds of educational research and practice as we interact with preservice teachers?"

Time spent in area classrooms and videos posted to the course Website constituted the most noticeable changes I made to my teaching at the university level. Through these changes, I was

better able to assist preservice teachers in connecting research and practice, to build relationships between myself as a university instructor and my school-based colleagues, and to improve my own understandings of the relationships between research and practice. Whereas this study is just one example of a teacher educator attempting to bridge the research/practice divide, there are several possible implications for others in the field of teacher education.

First and foremost, there are implications for teacher education programs. Although the university at which this research was conducted offered students practicum placements throughout their time in the teacher education program, the preservice teachers had difficulty making connections between information learned in university classrooms and experiences in area elementary schools. As is common in teacher education programs, the practicum placement accompanied a block of methods courses but was not tightly connected to the content and/or delivery of the methods course instruction. At least one student noticed this disconnect between what we had been studying in the course and what she was seeing in her practicum classroom: “It was very beneficial for me to see reform math being taught because I didn't have much of an opportunity to see it at my practicum site” (Mary, Final Evaluation, December 10).

To address the disconnect between methods coursework and the preservice teachers’ practicum placements, I systematically and intentionally planned three class field trips to elementary schools where reform mathematics was the norm. These visits contrasted with the traditional practicum placements in two important ways.

First, the visits allowed for a collective context for everyone involved in the methods course. In the past, class time had ticked away as each student described the types of things that were happening in her or his practicum placement. During those discussions, students found it difficult to compare different teachers, different children, different schools, and different curricula. Consequently, there was rarely time to engage in deep, reflective conversation about the mathematics under study. To ensure that class time could be spent truly engaging in thoughtful discussion, I utilized the field trips to create a collective context with which everyone was familiar. In doing so, discussion time focused specifically on the connections that were being made between the content of the methods course and the elementary classrooms we were visiting. In this way, it became clear that engaging in field experiences as a class offered a collective context that helped address the research/practice divide.

Second, as noted above, in traditional field placements, chance typically dictates whether types of instruction preservice teachers are seeing fully align with the instruction under study in the university methods course (Darling-Hammond, Hammerness, Grossman, Rush, & Shulman, 2005). In planning a collective field experience for the students in my methods course, I was able to ensure that the instructional strategies we were exploring at the university were being enacted in the field. In this way, the connection between research and practice was less happenstance. In fact, by planning ahead and interacting with expert elementary practitioners, we were able to intentionally connect research and practice in the elementary mathematics classroom—something that benefitted not only the future teachers, but the classroom teachers and myself as well.

From this study, we learn that teacher education programs can benefit from careful and critical examinations of field placements. In doing so, teacher educators can be deliberate in ensuring that university-based experiences and clinical field work become more tightly coupled. This is in line with the 2010 report of the National Council for Accreditation of Teacher Education's (NCATE's) Blue Ribbon Panel on Clinical Preparation and Partnerships for Improved Student Learning. In that report, the members of the panel called for a "shift away from a norm which emphasizes academic preparation and course work loosely linked to school-based experiences" (p. ii). Instead, the panel called for clinically based experiences in which students could make more explicit connections between academic content and pedagogical practice. To do so, instructors need to do more than simply assign projects to be completed in practicum placements that are unrelated to their methods courses at the university. The school visits utilized in this study were one small step toward this ideal. Rather than isolating ourselves to the university classroom, the preservice teachers and I had multiple opportunities to engage with children, with practicing teachers, and with one another as we made sense of the teaching and learning taking place in the classrooms we visited. We also discussed what we could learn from those outside of the university context as we reflected on questions such as What is teacher education? Where does teacher education occur? and Who educates future teachers?

In addition to implications for teacher education programs, there are implications for the individual methods course instructor as well. Methods course instructors are often accused of being out of touch with classroom practice (Barnett, 2006). This self-study was a powerful learning experience for me on multiple levels. It improved my elementary classroom practice, it allowed me to validate the power of the instructional methods I was encouraging in my methods course at the university, and it helped tie my instruction in that methods course to actual classroom practice. Through the use of videos of my own teaching practice in the elementary classroom, I was allowed a dual identity—that of the methods instructor as well as that of the elementary teacher. In so doing, I was able to show students that I, too, was working toward the ideal we were studying. I was attempting to stay in touch with classroom practice to bridge the research/practice divide. Teacher educators need to be cognizant of the need to continually search for opportunities to engage in more than causal interactions with P–12 classroom practice. This study allowed me to do just that.

One final implication of this study relates to future research. Zeichner and Tabachnick (1981) noted that even when programs take on the challenge of renewal and even when students believe in the ideas espoused by the university, the danger exists that these ideas will be washed out as they are socialized into the workforce. Clift and Brady (2005) described this danger:

> Although studying one semester of a methods course … enables researchers to build case examples of short-term impact, we have not yet progressed beyond the conclusion that new teachers are frequently socialized into the practices of their first job and may not base practice on theories and recommended practices from the teacher education programs. (p. 331)

Therefore, longitudinal studies of program graduates are sorely needed in the field of teacher education. Teacher educators must conduct studies that build upon single-semester inquiries like this one if we are to make the argument that teacher education can have a lasting impression on

the teachers our institutions prepare. As my journey within the field of teacher education continues, I intend to conduct longitudinal research as a follow up to this work and as a part of my research agenda as I build my career. This publication serves as a call to others in the field of teacher education to join in this effort and engage in longitudinal studies to better understand, inform, and address the research/practice divide.

Notes

[1]The names of the university, the school district and each of the students are pseudonyms used for purposes of confidentiality.

[2]The term *targeted minority* represented students who came from non-dominant backgrounds such as those labeled by the university as Black, Hispanic, Southeast Asian, or Native American/Alaskan Native.

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