Does Professional Development School Preparation Make a Difference? A Comparison of Three Teacher Candidate Studies

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ABSTRACT: The article compares three replication studies that explore potential differences between teacher candidates trained in professional development schools and those trained in a traditional program. Data sources included student teaching evaluations (analyzed quantitatively) and portfolio reflections, oral and written (analyzed qualitatively). The quantitative results showed group differences in the first study only; the qualitative results showed clear group differences across the three studies. In each study, the professional development school teacher candidates showed greater ownership, more integrated thinking, more connections between reflection and practice, more assessment-driven instruction, and more attention to the why of decision making. Differences in programmatic structure are used to explain the findings.

Sharon Robinson (2006), president of the American Association for Colleges for Teacher Education, recently called for us to "get serious" about clinical preparation, namely, by identifying aspects of good clinical programs. Professional development schools (PDSs) are clinical field sites in which school and university partners together focus on improving teacher education, the professional development of practicing teachers, and student learning within an inquiry-based environment (Holmes Group, 1986; Levine, 1992). For teachers, university faculty, and teacher candidates, PDS programs are intensive in terms of time and energy; for universities, they are expensive in terms of faculty load. With No Child Left Behind defining teacher quality as subject knowledge and with fast-track licensure programs advancing as a way to cover teacher shortages, resource-intensive programs such as PDSs must show evidence of their benefit. As such, it is essential that we understand the extent to which the investment of time and resources positively affects the various stakeholders, including teachers, teacher candidates, university faculty, and students, and so identify the aspects of PDS programs that make a difference.

Because of their complexity, connections have been difficult to make between PDS activities and their impact on teaching and learning, and factors that affect those impacts have been difficult to sort out (Abhal-Haqq, 1998; Teitel, 1998, 2004; Wiseman & Knight, 2003). Early studies were largely anecdotal. Over the past several years, however, improvements in design and methodology have produced increasingly

credible evidence in support of PDSs (Wiseman & Knight, 2003). A report by the Education Commission of the States (2003) found no conclusive evidence supporting PDS programs, but it did suggest the importance of strong, well-supervised field experiences that are integrated with coursework and so lead to a solid grasp of subject matter and pedagogy.

Strong field experiences that are integrated with coursework (Education Commission of the States, 2003) characterize many PDS programs. Current PDS research suggests (Ridley, Hurwitz, Hackett, & Miller, 2005) that PDS teacher candidates have longer field experiences (Fountain & Evans, 1994), more sustained supervision (Hayes & Wetherill, 1996), and more diverse experiences (Rasch & Finch, 1996).

Many teacher education programs define a solid grasp of content and pedagogy (Education Commission of the States, 2003) via the standards of the Interstate New Teacher Assessment and Support Consortium, which describe the knowledge, skills, and dispositions required for licensure. PDS and non-PDS programs both produce licensable teachers, as defined by the standards. What then, if anything, distinguishes PDS and non-PDS graduates?

Houston and colleagues (1995) found that principals perceive PDS graduates as being better prepared. In addition, evidence indicates that PDS-prepared teacher candidates feel well prepared and are less likely to feel overwhelmed as 1st-year teachers (Book, 1996; Patterson, 2000; Ross, 2001; Sandholtz & Dadlez, 2000; Thompson & Ross, 2000; Walling & Lewis, 2000).

The current article reports on and compares three studies that examined the extent to which PDS and non-PDS graduates differed in their descriptions of and reflections on their teaching at the point of licensure. Specifically, one study was repeated three times to investigate whether the initial findings would be evident across different cohorts (Castle, Fox, & Fuhrman, 2007; Castle, Fox, & Souder, 2006; Castle, Reynolds, Fox, & Souder, 2005).

Research Question

The foundation study was based on the following research question: To what extent and how do PDS and non-PDS teacher candidates differ at the point of licensure?

Program Description: PDS and Non-PDS Programs

The present Elementary Education Program has two paths to licensure (both postbaccalaureate): a PDS program and a non-PDS program (Castle et al., 2006). These programs are implemented in partnership with seven PDS schools and five non-PDS schools in three school districts. The PDS schools were carefully selected for diverse student populations, number of trained clinical faculty, technology integration, faculty commitment, and coherence with the elementary teacher education program. The non-PDS schools were long-term partners; as such, they had a level of faculty commitment, trained clinical faculty, and fairly diverse student populations—however, they were not selected systematically or according to the above criteria.

Admissions criteria are the same for PDS and non-PDS applicants. Candidates self-select the program to which they will apply. PDS candidates are full-time students with daytime courses and yearlong internship responsibilities. Non-PDS candidates are part-time students with evening coursework until the student teaching semester. Therefore, non-PDS students tend to be those who need to work full-time.

Teacher candidates proceed through their respective programs in cohorts. Teacher candidates in both programs take the same courses but in a different sequence. The faculty makes efforts to ensure the consistency of coursework between the two programs; that is, the following are all the same: the faculty members, the adjuncts trained by faculty members, the syllabi and expected student outcomes, the assignments and performance assessments, the

statement of expected dispositions, the constructivist philosophy, and the attention to the unit's conceptual framework. However, PDS candidates take methods courses during a yearlong internship, and non-PDS candidates complete their methods courses before a semester of student teaching. Most courses are taught by elementary education faculty, although the non-PDS program utilizes somewhat more adjunct professors.

All field placements and student teaching experiences take place within partner schools (either PDS or non-PDS schools) with clinical faculty who are trained through the elementary education program. Each PDS has an elementary education faculty member assigned to it for 1 day per week to supervise interns, work with clinical faculty, and facilitate the professional development and research aspects of the PDS program. In the non-PDS schools, the non-PDS teacher candidates are supervised by one elementary education faculty member and several adjuncts who know the program well. Specifically, they are supervised in a fairly traditional manner, with the supervisor conducting observations, conferences, and seminars as needed (i.e., he or she is not necessarily in the school 1 day per week). See Table 1 for a comparison of the two programs. All teacher candidates in both programs complete a student-teaching/internship portfolio and give a portfolio presentation in their school.

The PDS program involves four semesters: spring and summer semesters of coursework with field experiences, followed by a full-year internship with concurrent coursework (from the beginning to the end of the public school year). PDS teacher candidates complete two full-time classroom placements of one semester each, one in a lower grade and the other in an upper grade, both within the same PDS site. During the internship, PDS teacher candidates continue their coursework, completing course assignments that are connected to their classroom and students while taking on increasing responsibility for planning and teaching. They undertake 1 week of supported independent teaching in the fall and 4 weeks of independent teaching in the spring in the classrooms in which they are interning. They also participate in sheltered substituting—that is, subbing assignments that are scaffolded according to familiarity: Before independent teaching, they sub first in their clinical faculty's classroom, then within their team; after independent teaching, they sub throughout the school. Subbing does not occur during independent teaching.

In contrast, the non-PDS graduate program spans five semesters: four semesters of

Table 1. Similarities and Differences Between Programs: PDS Versus Non-PDS

PDS	*Non-PDS*
Students in cohorts	Students in cohorts
Trained clinical faculty	Trained clinical faculty
Partnership focus on teacher preparation, professional development, research, and student learning	Partnership focus on teacher preparation
Yearlong internship	Fifteen-week student teaching
Coursework during internship	Coursework before student teaching
Faculty in school 1 day a week to observe and conduct seminars as well as facilitate and participate in professional development, research, and student learning initiatives	Faculty or adjuncts in school 4–6 times per semester to observe and conduct seminars
Supervision embedded in life of school	Supervision involves primarily observations
Interns involved in classroom and schoolwide teaching, professional development, inquiry, committees	Student teachers involved in classroom teaching
Serve as substitutes and receive a stipend	Do not serve as substitutes

Source. Castle and colleagues (2005).

Note. PDS = professional development school.

Table 2. Summary of Methods in the Three Studies

Methods	*Study 1*	*Study 2*	*Study 3*
Participants			
PDS	60	21	26
Non-PDS	31	17	16
Cohort (*n*)	2	1	1
Data sources[a]			
Portfolio reflections	Oral	Oral	Written

Note. All three studies used analyses of variance and passages for their data analysis. PDS = professional development school.

[a]All three studies used the Student Teaching Evaluation Form.

coursework with field experiences, followed by a traditional student teaching internship semester consisting of 15 weeks, divided into 1 week of orientation to the school and two 7-week placements (one upper elementary and one lower elementary). Field experiences before student teaching consist of 15 hours per course of classroom observation, planning, and teaching.

Method

Participants

Participants included teacher candidates from four cohorts (see Table 2):

Study 1 included 60 PDS and 31 non-PDS candiates (two cohorts).
Study 2 included 21 PDS and 17 non-PDS candiates (one cohort)
Study 3 included 26 PDS and 16 non-PDS candiates (one cohort).

Before admission to the program, all participants were required to complete a bachelor's degree with a minimum grade point average of 3.0 and to pass Praxis I. All teacher candidates passed Praxis II before student teaching.

Data Sources

The quantitative data source for Studies 1, 2, and 3 consisted of the Student Teaching Evaluation Form. The qualitative data source for Studies 1 and 2 consisted of audiotapes of end-of-program portfolio presentations (as corroborated through a review of portfolios). The qualitative data source for Study 3 consisted of two written reflections from end-of-program portfolios, one an autobiographical reflection and the other a critical incident reflection (Table 2). All qualitative end-of-program data sources sought to capture teacher candidates' synthesizing reflections about their teaching.

Data Analysis

Quantitative analysis. For all three studies, the Student Teaching Evaluation Form was analyzed using one-way analysis of variance to determine any significant differences between groups, with program type as the independent variable (PDS versus non-PDS) and with form scores as the dependent variable. The number of analyses totaled 46 (1 for each item). Various analyses were conducted to test the extent to which the data met the assumptions for analysis of variance. The independence assumption was met by the characteristics of the sample; the assumption of normality was also met. The Levene test for homogeneity of variance was used, given the difference in sample sizes between the PDS and non-PDS groups. It indicated that the assumption of homogeneity of variance was met for most of the items on the Student Teaching Evaluation Form. Analyses that did not meet the equality-of-variance test were not reported in the results. The relatively small sample sizes may have had some impact on the results.

Qualitative analysis. The portfolio tapes and written reflections were coded as *PDS* or

non-PDS and analyzed qualitatively. The tapes of the portfolio presentations were transcribed by graduate research assistants not associated with the program. Transcriptions and written reflections were then divided into passages. A *passage* was defined as an idea segment. When a candidate discussed a specific strategy, incident, example, or reflective insight, it was considered a passage. Some passages were only one or two lines long, whereas others were considerably longer. In the first phase of analysis, the passages were analyzed qualitatively for emergent themes and patterns (Maxwell, 2005). The second phase consisted of clustering the passages around salient and recurring themes (Bogdan & Biklen, 1998). Patterns, color coding, and cross-case charts suggested additional ways to organize the passages, which led to deeper cross-case analyses (Patton, 1990; Yin, 2003). Finally, PDS and non-PDS passages were counted and compared within each theme to identify and describe any differences between the two groups.

Results

Table 3 shows a comparison of the quantitative results from the Student Teaching Evaluation Form. Study 1 resulted in 10 items with significant differences, all favoring PDS candidates (Castle et al., 2006). However, Studies 2 and 3, in which only two items were significant, did not support the first study (Castle et al., 2005; Castle et al., 2007). The only items with any commonality were the time management items in Studies 1 and 3: one on managing time in the classroom and one on multitasking. The lack of significant results across the studies may be due to a lack of differences, but they might also be attributable to cohort differences, to small sample sizes, or a lack of scoring reliability on the instrument.

Table 4 shows the results of the thematic passages for PDS and non-PDS teacher candidates by comparing the number of passages and the consistency of the themes. In every case, the number of passages in the *depth and integration* column is higher for the PDS teacher candidates; conversely, the number of passages in the *lack of depth and integration* column is higher for the non-PDS candidates. As such, PDS teacher candidates show greater depth and integration in their reflections on their teaching than do non-PDS teacher candidates.

Eight themes emerged. Five themes were consistent across all three studies: ownership versus otherness, how and why versus what, integration versus isolation, assessment specific versus assessment general, and reflection connected to practice versus reflection not connected to practice. One theme was consistent across two of the studies: student focus versus self-focus. This did not emerge as a theme in the second study, however. Two themes emerged in only the third study: differentiation specific versus differentiation general and manageable time versus not enough time. These may have surfaced in the last study because of the systematically increased attention to teaching differentiation across the program or because of differences inherent in the oral and written reflections (see the individual studies for representative quotes: Castle et al., 2005; Castle et al., 2006; Castle et al., 2007).

Table 3. Results Comparison Across the Three Studies: Student Teaching Evaluation Form

Significant Items	*Study 1*	*Study 2*	*Study 3*
Total	10	1	1
Time management	1[a]	0	1[b]
Planning	0	1	0

[a]Managing class time.
[b]Multitasking.

Table 4. Comparison of Thematic Passages Across the Three Studies: PDS Versus Non-PDS Groups

	Depth and Integration				*Lack of Depth and Integration*		
	Study 1	*Study 2*	*Study 3*		*Study 1*	*Study 2*	*Study 3*
Ownership				Otherness/borrowing			
PDS	84	49	10	PDS	16	9	4
Non-PDS	12	14	0	Non-PDS	49	39	29
How and why				What			
PDS	48	32	21	PDS	9	6	8
Non-PDS	10	6	2	Non-PDS	28	29	27
Integration				Isolation			
PDS	32	25	22	PDS	5	5	2
Non-PDS	6	4	3	Non-PDS	30	23	31
Student focus				Self-focus			
PDS	22	—	10	PDS	6	—	2
Non-PDS	4	—	7	Non-PDS	18	—	40
Assessment: Integrated/specific				Assessment: Tools/general			
PDS	29	28	14	PDS	21	1	4
Non-PDS	6	6	5	Non-PDS	13	2	29
Reflections connected to practice				Reflections not connected to practice			
PDS	23	18	51	PDS	5	4	11
Non-PDS	3	7	2	Non-PDS	9	29	137
Differentiation specific				Differentiation general			
PDS	—	—	12	PDS	—	—	2
Non-PDS	—	—	1	Non-PDS	—	—	33
Time manageable				Not enough time			
PDS	—	—	15	PDS	—	—	3
Non-PDS	—	—	2	Non-PDS	—	—	35

Note. PDS = professional development school. Dashes (—) indicate no emergent theme.

Discussion

Differences and Replication

The research question asked, to what extent and how do PDS and non-PDS teacher candidates differ at the point of licensure? The initial study was replicated twice to determine whether results were particular to a cohort or consistent patterns were evident across cohorts. If the results are consistent across the three studies, there is a greater chance that they are due to the impact of the PDS program rather than to cohort differences or other factors.

The qualitative results showed evident differences between PDS and non-PDS teacher candidates that consistently surfaced across these three studies—specifically, a clear pattern of deeper and more integrated thinking on the part of the PDS teacher candidates, as based on their reflections on their teaching. Consistent themes across all three studies included ownership, how and why, integration, assessment-driven instruction, and reflection connected to practice.

Although the reflections in Studies 1 and 2 were transcribed from oral portfolio presentations and although the third study's reflection data were drawn from written reflections, the prompts in all settings asked teacher candidates to reflect on their teaching and learning in the classroom setting. The content of teacher candidates' reflections showed that differences exist between the two groups regardless of the study.

For example, PDS teacher candidates tended to discuss assessment as being integrated with planning and instruction, whereas non-PDS teacher candidates tended to describe assessment tools. The following quotes are representative of the two groups:

> I have developed the skill of using assessment to plan future lessons. This was

> particularly important in math class. Each day I would check the students' homework to decide what material needed further teacher [explanation] and review. I based future lessons around the problems that the students had difficulty with. (PDS 14)

> Many of the assessments I used in my second placement were informal. During reading, I would write anecdotal records, in math I collected and evaluated task sheets. And in writing, I would flip through work samples to gain a sense of where each student was at. (Non-PDS 29)

In answer to the research question, PDS teacher candidates differed from non-PDS teacher candidates, at the point of licensure, in the depth and integration of their thinking. This pattern was consistent across all cohorts in the areas of ownership, how and why, integration, assessment-driven instruction, and reflection connected to practice.

As always, the underlying question is, what are the implications for student learning? Given that no student learning data were collected during or subsequent to the licensure program, we can forward only hypotheses. It seems logical that more sophisticated teachers would have a better chance of influencing student learning than would less sophisticated teachers. For example, a teacher who uses assessment results to plan instruction would probably have a greater chance of affecting learning in a diverse group of students than would one who plans instruction without considering assessment results. Likewise, reflections tied to practice seem more likely to affect student learning than reflections not tied to practice. Rivlin, Hanushek, and Kain (2002) found that teaching experience was positively related to student learning gains. Therefore, PDS teacher candidates might affect student learning more or earlier in their careers than their non-PDS counterparts because they have considerably more teaching experience. These hypotheses need to be investigated.

Structures and Experiences

The results show clear and consistent differences between PDS and non-PDS teacher candidates across the three studies. The next question for PDS researchers is why. What aspects of PDSs might have contributed to the positive differences? If we are to heed Robinson's (2006) call, we must identify the aspects of good clinical programs evident in PDSs. Identifying these aspects is critical if PDSs are to become more effective and if further research is to determine what elements are essential to that effectiveness.

Despite a strong effort on the part of the program faculty to keep as many aspects of the PDS and non-PDS programs as consistent as possible, the yearlong experience with integrated coursework remained unique to the PDS. Therefore, structural differences between the programs might help explain some of the results. (Table 1 shows the differences in structure between the PDS and non-PDS programs.) These structural differences resulted in different experiences for the PDS and non-PDS candidates, which may have affected their thinking about their teaching.

One programmatic structural difference is the length of time in the internship (Fountain & Evans, 1994; Ridley et al., 2005). PDS teacher candidates are in their schools for a full school year, as compared to 15 weeks for the non-PDS candidates. This enables teacher candidates to observe students' growth over time, thereby resulting in a deeper understanding of the role of development and assessment. They are also in multiple classrooms because of the days spent substitute teaching. The longer time spent in the classrooms provides PDS candidates with considerably more time to develop a larger repertoire of instructional, differentiation, assessment, and management strategies and to connect these elements of teaching. As one PDS candidate said, "I believed [in continuous assessment] before—I used it but not consistently. And this semester I feel that I've grown up to use it all the time." In contrast, the non-PDS candidates complete two 7-week placements. They have time to focus on planning and instruction, with less time to go into depth on assessment and to refine their management skills.

Another distinction is that the PDS teacher candidates' experience base is more broad and varied than that of the non-PDS teacher candidates (Rasch & Finch, 1996;

Ridley et al., 2005). For example, they see the beginning and end of the school year. They substitute throughout the school, which exposes them to a variety of grade levels and teaching styles. They serve on grade-level teams and schoolwide committees. PDS interns are viewed as the responsibility of the whole school, so, as junior faculty, they become part of the culture and thus participate in all its aspects. One PDS teacher candidate said, "I've felt a part of the whole staff since day one. That's something a lot of [student teachers] haven't experienced." This breadth and depth of experience allows PDS teacher candidates to see how experienced teachers think about teaching, and it contributes to their feelings of ownership. A PDS teacher candidate said, "There are a tremendous number of people invested in my success." In contrast, the non-PDS teacher candidates see the beginning or end of the school year but not both. They do not substitute; as such, they have less exposure to other teachers' planning and teaching styles. They do not serve on committees, although they do participate in team meetings; therefore, they have fewer opportunities to become involved in the culture of the whole school, and they have fewer people directly influencing their learning.

A third structural difference that results in experiential differences is that PDS teacher candidates receive more supervision and feedback (Hayes & Wetherill, 1996; Ridley et al., 2005), not only because they are in the school longer, but because they have weekly interactions with the university facilitator at the school and sustained interactions with their clinical faculty. Furthermore, because of the PDS focus on collaboration and a learning community for everyone, teacher candidates receive informal guidance from teachers and administrators across their school. This means that PDS candidates engage in significantly more interactive reflecting on their teaching and the teaching they observe. They are able to reflect on and discuss their teaching on a daily basis with their clinical faculty and with other school faculty and during their weekly meeting with the university supervisor. In contrast, although non-PDS teacher candidates have consistent daily interactions with clinical faculty and perhaps other team members, they generally have four individual interactions with the university supervisor and seven group interactions during seminars, resulting in considerably less time for individual reflection with others. An additional distinction is that PDS teacher candidates continue their coursework during the internship, which enables them to integrate theory and practice on a deeper, more real-world level than having coursework before student teaching. A report by the Education Commission of the States (2003) suggests how important the integration of fieldwork and coursework is in relation to subject area knowledge and pedagogy. Coursework that is concurrent with the internship enables PDS candidates to make more connections between theory and practice and thus integrate those connections into their thinking and practice. It enables them to learn to negotiate the give-and-take between the ideal and the implementation. In addition, PDS clinical faculty participate in curriculum alignment, in which school faculty review and revise syllabi and school-based assignments so that the school–university curricula are as seamless as possible. This alignment at the school site also provides clinical faculty with the information they need to draw immediate parallels to and examples of course content as it applies in the classroom setting and, in turn, discuss this with teacher candidates. In contrast, the non-PDS teacher candidates have their coursework before their student teaching; as such, the give-and-take between theory and real-world connections has fewer opportunities to occur. Detailed official curriculum alignment does not occur with teachers in the non-PDS schools, although the clinical faculty receive the syllabi and can thus help the teacher candidates make connections, if they choose.

The Education Commission of the States (2003) report suggests the importance of strong supervision by well-trained teachers and university faculty, but it does not address the amount, frequency, consistency, or particular qualities of that supervision. Our research indicates what may result in more and deeper connections and more integrative thinking about the teaching and learning cycle—namely, the amount of supervision and the

amount of opportunity to discuss and reflect on multiple experiences with a variety of professionals on a sustained basis.

Conclusion

The PDS and non-PDS programs both produced competent licensable teachers. However, the PDS program resulted in teachers who were able to think more deeply about their teaching; integrate planning, instruction, and assessment; and connect their reflections more directly and specifically to their daily practice and students. These findings show a consistent pattern across three studies, which increases the likelihood that the differences are attributable to the PDS program.

Five emergent themes were evident in all cohorts. These focused on the quality and depth of teachers' thinking and experience: ownership, how and why, integration, assessment, and reflection connected to practice. By talking in the present tense and using personal possessive adjectives, PDS teacher candidates showed ownership of their students, their classrooms, and their teaching, almost as if the non-PDS teacher candidates were practicing for the real thing while the PDS teacher candidates were doing the real thing. This feeling of ownership may have contributed to the PDS candidates' higher levels of sophistication in integrating the various aspects of teaching, or vice versa. The PDS candidates talked about teaching in highly integrated ways and provided multiple examples drawn from their classroom settings, whereas the non-PDS students talked about teaching in more isolated ways. Although both sets of candidates understood and could apply the Interstate New Teacher Assessment and Support Consortium standards in their teaching, the PDS teacher candidates actually integrated the standards, thus indicating a more sophisticated understanding of teaching and the ability to address its complexities in real situations. Finally, one theme in two of the studies showed that PDS candidates were more student centered than self-centered. This is not a consistent pattern, because it appears in only two studies, but it is nonetheless worth noting. In these two studies, the PDS teacher candidates focused more on the students and their performance than did the non-PDS teacher candidates, who focused more on their own plans, their own teaching tools, and their own performance. Focusing first on one's performance, then shifting to a student's performance, is a typical developmental pattern for beginning teachers; the current study suggests that PDS teacher candidates might be further along this developmental continuum at the time that they are licensed, as compared to non-PDS teacher candidates. If so, PDS candidates would be more likely to be student focused as 1st-year teachers and more likely to affect student learning earlier in their careers. These findings support claims that PDS graduates are more like 2nd-year teachers (Book, 1996; Patterson, 2000; Ridley et al., 2005; Ross, 2001; Sandholtz & Dadlez, 2000; Walling & Lewis, 2000), as well as Ridley and colleagues' (2005) speculation that "extensive clinical training and school immersion may accelerate PDS-prepared teachers' developmental progression" (p. 54). This is worthy of follow-up research.

The structures and resulting experiences of the teacher candidates may help to explain the differences in their thinking. Particularly noteworthy in the PDS sites were the following observations: multiple extended opportunities for collaboration with a variety of school professionals; multiple extended opportunities for reflection on teaching practices with university and school faculty; multiple extended opportunities to grow into complex aspects of teaching such as assessment; and multiple extended opportunities to link theory and practice in a real setting. These elements of PDS practice are worthy of further study to determine the extent to which they are important in fostering more sophisticated thinking in PDS graduates.

These conclusions are strengthened by being consistent over several years and several cohorts. At the same time, the findings are limited by the fact that they are based on candidates' reflections, not their actual teaching performance or the performance of their stu-

dents. However, if teaching experience is positively related to student learning gains as Rivlin and colleagues (2002) argue, then PDS graduates are more likely than non-PDS graduates to have a positive impact on student learning earlier in their teaching careers. In that sense, accelerating teacher development through extended PDS experiences has a potentially important impact, one that may well be worth the investment. Studies of PDS and non-PDS beginning teachers' performance and the performance of their students are needed to strengthen that case. SUP

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