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PROFESSIONAL DEVELOPMENT FOR CHRISTIAN TEACHERS: A MIXED-METHODS STUDY

Abstract: This study explored Christian school teachers' professional development experiences using a mixed-method multi-case study approach that utilized National Staff Development Council's Standards Assessment Inventory and collected qualitative data from teacher focus-group interviews and written reflections to discover themes and patterns in their professional processes, growth, and learning. Nine evangelical Christian schools and 171 teachers participated. Together, the survey and qualitative data indicated many positive learning elements were present, yet some important elements were missing. One area uniquely present but not always indicated in the general professional development literature was the role of teachers' Christian faith in guiding and inspiring personal and professional learning.

Keywords: Christian teachers, professional development, national standards

Introduction

Today's educational environment requires Christian school teachers who understand teaching and learning, have strong content knowledge, and can make connections between life experiences and the curriculum. These teachers are expected to be continually learning to improve their practice, collaborating together to improve student learning. Professional learning is essential to help teachers keep up with new developments in research and practice related to teaching and learning. Furthermore, there has been a renewed interest that this learning be connected to school improvement, quality instruction, and most importantly, improved student learning (Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009b; Garet, Porter, Desimone, Birman, & Yoon, 2001).

On-the-job learning for teachers is as old as the profession itself. However, the knowledge-intense environments and competition from increased media distractions for students has raised concern about the effectiveness of professional development on teacher practice. There has been concern that teachers get not just workshops and materials but transformational learning that leads to better professional practice (Borko, 2004; Desimone, 2011; Guskey & Yoon, 2009).

Christian schools have not been left out of this important discussion (Finn, Swezey, & Warren, 2010; Headley, 2003, 2008; Neuzil, 2010; Neuzil & Vaughn, 2010). However, little research exists on professional development practices of private Christian school teachers.

This study explored Christian school teachers' professional development experiences using a mixed-method multi-case study approach. It focused on teachers in one large metropolitan area. Data was collected by conducting focus group interviews and written reflections, and by using the National Staff Development Council's (NSDC) Standards Assessment Inventory (SAI). The NSDC Standards for Professional Learning outline the characteristics of professional learning that lead to effective teaching practices, supportive leadership, and improved student results. The literature on professional learning for teachers supports the NSDC standards.

Professional Development

A review of the literature suggests that traditional professional development programs and practices have been more didactic, less hands-on and job embedded, and more about changing knowledge than systematically improving practice (Desimone, 2009; Weiss & Paisley, 2006). French (1997) wrote that "the most common approach to teacher learning—one-shot lectures delivered to all teachers in a building—are squeezed in after school or tucked into half-day sessions once a year" (p. 41). These professional development activities are often described as "outmoded" and "factory modeled"; they are "egg-crated isolation of teachers" and do not support a shift to more progressive professional development practices. More recently there has been a move in the philosophy, content and context of professional learning brought about by the realization that professional development practices should be based on good research and valid evidence that result in teaching practices which promote teaching and learning (Campbell, McNamara, & Gilroy, 2004).

Professional learning founded on a strong research base has been a driving force in the newer model of professional development (Luke & McArdle, 2009). At the same time, however, it is important to note that

not all studies support the idea of key characteristics that support effective professional learning (Hill, 2009). For example, French (1997) stated "that delivering the same instruction to everyone ignores the different needs of teachers in different fields with differing levels of experience. These largely passive experiences are discounted by teachers as boring and irrelevant" (p. 41). Other research (Putnam & Borko, 2000) indicates that successful professional development activities depend on the specific learning goals of the teachers.

The effectiveness of professional development (PD) practices has been a "well-researched" topic for more than a decade (Maldonado & Victoreen, 2002). Educational leaders, practitioners, and researchers have been increasingly concerned with improving the quality of evidence about the effectiveness of teacher professional development, particularly as it pertains to professional development's influence on teachers' knowledge and practice. Penuel, Fishman, Yamaguchi and Gallagher (2007) concluded that there were various components that constitute "effective" professional development practices. Wilson and Berne (1999) summarized well the current literature citing collaboration, teacher interaction, active learning and inquiry as the most common themes in contemporary professional development research on teacher learning.

Garet et al. (2001), in the first large-scale empirical research comparison of the effects of distinctive aspects of professional development on teachers' learning, indicated three principal features of professional learning experiences that had significant positive impact on teachers' knowledge, skills and classroom practice. These principal features were (a) content of the professional learning (i.e., what the teachers are actually learning), (b) active learning (e.g., meaningful discussions, planning, and practice), and (c) coherence of professional development program. More recent literature reviews (Borko, 2004; Wayne, Yoon, Zhu, Cronen & Garet, 2008; Yoon, Duncan, Lee, Scarloss & Shapley, 2007) examined studies that identified the features of effective professional development programs. Wayne et al. (2008) noted that it was generally acknowledged that intense, sustained, job-embedded, and content-focused professional development was more likely to improve teacher knowledge, class instruction, and student achievement. Furthermore, active learning, constancy, and collaboration have also been promoted as promising professional development practices. Therefore, recent literature reviews suggest the important role these practices contribute to high-quality and effective professional development.

Desimone, Porter, Garet, Yoon and Birman (2002) found that staff

development centered on particular teaching practices increased those practices in the classroom. Their study discovered that active learning increased the effect of professional learning on teachers' instruction as well. Yet some researchers (Kazemi & Hubbard, 2008) challenged the typical research on professional development that generally focused on what teachers learned as a result of their participation in professional development.

A more recent report (Darling-Hammond et al., 2009a) examined what researchers discovered about teacher professional learning that contributed to instructional practice and student learning. Among their findings, sustained and intensive professional development, teacher collaboration, content focus, and practice-focused learning were common elements of professional development that improved teaching and learning, both for teachers and students. NSDC standards are supported by these recent findings.

Private schools—faith-based schools in particular—have received limited attention in the research literature on professional learning. Most studies have been built upon Headley's work and utilized the survey instrument he developed in 1997 (Finn, Swezey & Warren, 2010; Headley, 2003, 2004, 2008; Neuzil, 2010; Neuzil & Vaughn, 2010). These studies generally concluded that the professional development practices at these Christian schools were mostly traditional (e.g., workshop and course participation, teacher evaluations, and book studies) and were not reflective of professional learning communities.

Methods

This study explored Christian school teachers' professional development experiences using a mixed-method multi-case study approach (Montoro, 2012). It utilized the National Staff Development Council's (NSDC) Standards Assessment Inventory (SAI), developed by the NSDC with the contribution of 40 professional associations and education organizations. The standards emphasize that the purpose of professional learning is for educators to develop the knowledge, skills, practices, and dispositions they need to help students perform at higher levels. The NSDC-SAI was created to assess the professional learning of teachers as reflected in its standards which are organized into three major areas: context, process, and content.

The context standards related to the general school environment are (a) *Learning Communities*, (b) *Leadership*, and (c) *Resources*. The quality of the educational environment in which instruction takes place is cen-

tral to good education. With this educational context in mind, learning communities become a vital component of teacher professional learning that improves the learning of all students. Knowledgeable and skillful leaders who guide continuous instructional improvement are key elements in developing these learning environments. Of course, resources are needed to support adult learning and collaboration.

The processes supporting quality staff development are also important. The six NSDC standards related to process describe how professional learning takes place within a school setting: (d) *Data-Driven*, (e) *Evaluation*, (f) *Research-Based*, (g) *Design*, (h) *Learning*, and (i) *Collaboration*. Professional development that improves the learning of all students uses student data to determine adult learning priorities, monitor progress, and help sustain continuous improvement. Teacher input is an important part of the process. Quality professional development utilizes multiple sources of information to guide improvement, demonstrate the impact of improvements, and make research-based decisions that meet the school's learning goals, both for teachers and students. Collaboration is important for this to take place; therefore, quality professional learning activities provide educators with the knowledge and skills to collaborate with each other.

The content of the learning experiences is the third important aspect of teacher professional growth identified in the NSDC-SAI. The content standards relate to elements that contribute to effective teaching and learning: (j) *Equity*, (k) *Quality Teaching*, and (l) *Family Involvement*. If students are to increase their learning, teachers need to understand and appreciate all students; create safe, orderly and supportive learning environments; and hold high expectations for the students' academic achievement. Furthermore, professional learning should deepen teachers' content knowledge, provide them with research-based instructional strategies to assist students in meeting rigorous academic standards, and prepare them to use various types of classroom assessments appropriately. Last, schools should prepare teachers with knowledge and skills to involve families and other stakeholders in the life of the school.

The NSDC-SAI survey represented the three categories of the standards: (a) Context, (b) Process, and (c) Content. These categories are broken down into 12 areas that represent the NSDC Standards for Staff Development. A total of 60 items was included on the survey—five indicator items for each of the 12 NSDC standards. Teachers rated the indicators using the following Likert scale: o = Never, 1 = Seldom, 2 = Sometimes, 3 = Frequently, and 4 = Always.

Qualitative data were also collected. Teacher focus-group interviews and written reflections were used to discover themes and patterns in their professional processes, growth, and learning. Nine evangelical Christian schools were a part of the study; 171 teachers participated, with 37 of them participating voluntarily in the focus group interviews.

Findings

The findings are presented in three major sections: the quantitative findings, the qualitative findings, and a comparison between the two different sources of data.

Quantitative Findings

The results from the NSDC survey (Table 1) indicate that the Christian teachers rated content standards highest (2.7), while they rated the process standards the lowest (2.15).

Table 1. Summary of Results of NSDC-SAI

Context Standards		
Learning Communities	2.0	
Leadership	2.9	
Resources	2.5	
Total Context Avg.	2.47	
Process Standards		
Data-Driven	2.0	
Evaluation	1.8	
Research-Based	2.3	
Design	2.3	
Learning	2.1	
Collaboration	2.4	
Total Process Avg.	2.15	
Content Standards		
Equity	3.1	
Quality Teaching	2.3	
Family Involvement	2.7	
Total Content Avg.	2.7	

The major categories within the survey with the highest means were equity (3.1), leadership (2.9), and family involvement (2.7), indicating that teachers had a strong commitment to assuring that all students learn, that they appreciated their school's leadership in regard to the professional development efforts at these schools, and that they involved the families in student learning. The three categories with the lowest means were evaluation of professional practice (1.8), data-driven professional development practices (2.0), and learning communities (2.0). This suggests that these teachers were in school environments where their professional development was not driven by student nor teacher data and that they functioned primarily without the benefit of professional learning communities.

Of all the individual items in the survey, the top three fell within the equity category. Teachers had a very positive response to the following three items: "showed respect for all students" (3.8), "teachers have high academic expectations for all students" (3.4), and "teachers created positive relationships with students" (3.6).

Qualitative Findings

During the interviews and in the reflective journals, the teachers reported many sources of professional learning, including parental, school, and college influences as children and youth; faith development aspects; and personal experiences such as parents, travel, dialogue, and reading. The data collected indicated that many positive learning elements were present. The teachers sought graduate education, content networks, and training via the Internet as places for growth. They also reported utilizing more traditional learning methods (e.g., generalized book discussions and workshops) and informal, individual professional means of learning (e.g., daily experiences and faculty conversations). Teachers believed that their educational leaders had strong beliefs about the importance of teacher professional learning and that they articulated a shared commitment to professional growth. However, their educational leadership often designed broad professional learning activities, while most teachers preferred content-specific professional learning tied to effective teaching strategies. Teachers wanted their leaders to be better role models of professional growth and learning.

During the interviews, the role of the teachers' Christian faith became very apparent in guiding and inspiring their personal and professional learning. They reported their Christian "walk" was a sustaining force in their own professional development. One teacher, while reflecting on the

experiences that contributed to her being the teacher she is today, wrote that it was "my Christian upbringing and personal experience with Jesus Christ" that influenced me as a teacher. Another said, "God continually gives me strength and wisdom." Referring to God, a teacher said, "He has blessed my efforts to become a better teacher. He is the one who gives me the strength and ability I have." While discussing the importance of content-specific professional development, one teacher made this observation:

Obviously, preparation in content areas is foundational in being able to teach, but in our Christian context, I think that serves as just a starting point in terms of having the impact that we desire to have on young people. Your walk with the Lord, your growth in your own personal, spiritual faith, has a big impact on the overall commitment that it takes to stay with Christian education.

Not only have teachers considered their personal faith vital to their personal and professional growth, they entered teaching as a calling to ministry—a calling made evident by the gifts God had given them. One teacher, while listing several things that impacted her teaching journey, demonstrates that sense of calling:

God has gifted me to teach. It was clear, from a young age, that my God given gifts lend themselves to this profession. The gift of teaching coupled with administration, compassion, mercy, and wisdom work together to give me an ability to explain things, teach concepts clearly, and interact with people. These gifts play out in teaching school children as well as the ministry of teaching adults in a Christian setting.

A number of teachers believed God called or directed them into Christian school ministry. As one gentleman wrote, "God put a desire in my heart to help others learn and understand when I was in elementary school." These teachers considered themselves "called" to nurture their students' faith and learning. This commitment to God and his children motivated them to become the best teachers possible.

Christian school teachers' faith experiences played an important role in their development as teachers as well, as one teacher's comment shows:

One thing is a personal growth in my walk with the Lord. And I know we all could say that. And as I've taught through the years, my walk with the Lord has been very important. I can see how the Lord has worked inside me to bring more of his character into my life and more of his wisdom to be a better teacher, have better relationships with my students, my parents, and see how to work effectively, through His Word.

Prayer, Christian educational experiences, godly role models and colleagues, God's grace and personal religious experiences contributed to the overall professional growth and learning of these teachers.

The Christian school teachers developed professionally through a variety of means. Their professional learning was very typical of teachers in general. They learned through traditional professional development practices, by daily job-embedded classroom and professional experiences, and informal professional learning experiences. But they expressed a desire for more well-planned professional development opportunities that were content specific and allowed them to collaborate or network with other teachers, particularly from other Christian schools. They also received support to attend conferences and workshops and complete advanced degrees. In addition, they were given extra time during the school day to use student data to make collaborative decisions. But it was primarily through their relationship with God that they believed they grew professionally.

Comparison Between Qualitative and Quantitative Results

In this section the NSDC standards are used as a guide to describe how the teachers related to the three major areas: context, process and content. For the context standards, the survey and interview data were in alignment for the *Leadership Communities and Resources* standards. Teachers indicated that their schools rarely operate as learning communities and that more resources were needed for professional development. High means on the survey for the *Leadership* standard indicate that teachers believed principals understood the need for continual teacher learning and that the principals fostered a culture for learning, but teachers reported moderate empowerment. During the interviews teachers reported that principals understood and encouraged professional development, but they needed more and expressed some frustration in not having a stronger voice in planning their professional development (PD).

For the process standards, the survey and qualitative data were generally in alignment in that both showed all six process standards as being rarely implemented in the schools. Regarding Data-Driven Decisions, the survey showed this standard with the second lowest mean (2.0), indicating poor systematic use of data in planning and assessing PD. Comments during the interviews indicate little or no use of data as a part of PD. The same was true for Evaluation (mean = 1.8). The interviews showed that evaluation was missing in these schools. A moderate mean (2.3) shows that sometimes Research-Based strategies were used in PD; however, educational research was not mentioned in any of the interviews. Regarding the Design standard, both the surveys and the interviews show

that professional development activities tend to be traditional, mostly conferences and workshops, without taking into consideration teacher experience or knowledge. Activities tended to be broad and general and geared for all subjects and all across K-12. The survey and interviews indicated that the *Learning* standard was rarely met with active learning processes. Teachers experienced PD that was often passive and didn't provide much variety or choice. The final process standard was *Collaboration*. Data indicated that collaboration was normally teacher initiated. Administrators rarely scheduled time for teacher collaboration and collaboration wasn't scheduled into the school's PD plans.

The content standards showed alignment between the survey and interviews for the Equity and Quality Teaching standards. Regarding *Equity*, both data sources supported the idea of meeting the academic, spiritual, and social needs of all students. Teachers recognized that all students are created in God's image; therefore, they believed students have intrinsic worth and varying learning styles. The Quality *Teaching* standard is connected to opportunities for deep understanding of the content area. Both the survey and interviews revealed that teachers rarely experience teaching strategies based on research, nor do they have content-specific strategies modeled for them. Some informal conversations with other teachers indicate they are willing to take initiative and ownership for their learning. Also, enrolling in graduate programs and utilizing online opportunities increase the possibility of quality teaching, but these experiences seem to be haphazard and not part of a wellplanned professional development program. The final standard, Family *Involvement*, showed a high mean in the survey, but the teachers who were interviewed rarely spoke about families and it didn't appear to be considered a component of the teachers' professional development.

In summary, the survey and interview results tended to support one another. The biggest exception was the description of the spiritual component and the extent to which teachers really believed their relationship with Christ was foundational in the way they are being shaped as teachers. This aspect seemed to have the biggest impact on the way teachers treated students—working with them as individuals and believing that all students can learn.

Implications for Practice

The professional development opportunities for the Christian teachers in this study appear to be well below the ideal shown in the NSDC standards. Of the three major areas, the process standards were the weakest

and present an opportunity for those administering these schools to implement more forms of student and teacher evaluations. Some reported that they did not have a culture where teachers observed and gave feedback to each other, nor was there regular data collecting and sharing or data-driven decisions and shared assessments. This was in stark contrast to the recommendation by NSDC:

[Schools should] work with staff members to create the culture, structures, and dispositions for continuous professional learning and create pressure and support to help teachers continuously improve by better understanding students' learning needs, making data-driven decisions regarding content and pedagogy, and assessing student's learning within a framework of high expectations. (Darling-Hammond et al., 2009a, p. 3)

Due to time and monetary constraints, these teachers learned by the only means available. Oftentimes these learning experiences were limited to generalized book discussions and/or workshops presentations. Informal learning experiences of these teachers, including faculty conversations and self-directed professional learning, became the primary source of growth and learning (Grangeat & Gray, 2007; Haigh, 2005; Wilson & Berne, 1999). Although learning from one another and from personal experiences was a valid and good means of professional growth and learning, these teachers needed more well-planned, well-designed, timely, and quality professional learning opportunities that were content specific (Darling-Hammond et al., 2009a; Kazemi & Hubbard, 2008; Kimball, 2011). Teachers were accustomed to passive learning. As Easton (2008) wrote, "teachers will have to move from being trained or developed to becoming active learners. Significant change will require educators to alter their attitudes and behaviors" (p. 755).

Personal beliefs, particularly religious ones, played such an important role in the professional lives of these teachers that it seems natural for the educational leaders at these schools to integrate the Christian faith, with its moral vision and social imperatives, into the school's professional development goals to better tie faith and learning together. These teachers desired to be a part of professional learning communities that offered relevant and timely professional learning opportunities based on research and teacher learning needs (Luke & McArdle, 2009; Wayne et al., 2008). Since the spiritual component was so strong in this study, one wonders if it would be possible to use the Christian (biblical) ideal of small groups to bridge into the culture of Christian schools. Teachers could meet regularly with peers who have similar interests or situations. This could be a safe place for teachers to

share their learning and be vulnerable about their challenges.

The role of the principal was a highlight of the findings. Teachers expressed an appreciation for their leadership's positive understanding and attitude concerning the vital role of teacher professional learning (King, 2011). However, they wanted and needed more support for their learning. It is possible that the principals themselves needed deeper understanding and a greater vision of what professional development could look like in Christian schools.

Following are several recommendations and one question for Christian professionals and leaders. In conclusion, leaders, particularly Christian educational leaders, should consider the following recommendations: (a) creating professional development funding in their budgets, (b) planning quality professional learning activities in cooperation with teachers who have content-rich and relevant strategies, (c) sharing current literature on quality and effective professional practices, (d) modeling lifelong professional learning, and (e) encouraging formal teacher-directed collaboration that includes experimentation and reflection.

In conclusion, we need to be asking ourselves this question: How can we as a Christian community deepen our understanding of the way God really does shape the professional learning of His teachers?

References

- Borko, H. (2004). Professional development and teacher learning: Mapping the terrain. *Educational Researcher*, *33*(3), 3-15.
- Campbell, A., McNamara, O., & Gilroy, P. (2004). *Practitioner research and professional development in education*. London: Paul Chapman.
- Darling-Hammond, L., Wei, R. C., Andree, A., Richardson, N., & Orphanos, S. (2009a). *Professional learning in the learning profession: A status report on teacher development in the United States and abroad.* Dallas, TX: National Staff Development Council.
- Darling-Hammond, L., Wei, R. C., Andree, A., Richardson, N., & Orphanos, S. (2009b). State of the profession: Study measures status of professional development. *Journal of Staff Development*, 30(2), 42-50.
- Desimone, L. M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher*, *38*(3), 181-199.
- Desimone, L. M. (2011). A primer on effective professional development. *Phi Delta Kappan*, *92*(6), 68-71.
- Desimone, L. M., Porter, A. C., Garet, M. S., Yoon, K. S., & Birman, B. F. (2002). Effects of professional development on teachers' instruction: Results from a three-year longitudinal study. *Educational Evaluation and Policy Analysis*, 24(2), 81-112.
- Easton, L. B. (2008, June). From professional development to professional learning. *Phi Delta Kappan*, 89(10), 756-761.

- Finn, D., Swezey, J., & Warren, D. (2010). Perceived professional development needs of teachers and administrators in PS-12 Christian schools. *Journal of Research on Christian Education*, 19(1), 7-26.
- French, V. W. (1997). Teachers must be learners, too: Professional development and national teaching standards. *NASSP Bulletin*, 81(38), 38-44.
- Garet, M., Porter, A., Desimone, L., Birman, B., & Yoon, K. S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal*, *38*(4), 915-945.
- Grangeat, M., & Gray, P. (2007). Factors influencing teachers' professional competence development. *Journal of Vocational Education and Training*, 59(4), 485-501. doi: 10.1080/13636820701650943
- Guskey, T., & Yoon, K. S. (2009). What works in professional development? *Phi Delta Kappan*, 90(7), 495-500.
- Haigh, N. (2005). Everyday conversation as a context for professional learning and development. *International Journal for Academic Development*, *10*(1), 3-16. doi: 10.1080/13601440500099969
- Headley, W. S. (2003). Professional development policies and practices in schools affiliated with the association of Christian schools international. *Journal of Research on Christian Education*, 12(2), 195-215.
- Headley, W. S. (2004). A survey of professional needs and activities. *Christian School Education*, 7(2), 13.
- Headley, W. S. (2008). The academic preparation of educators in the K-12 schools of the Association of Christian Schools International. *Private School Monitor*, 29(2), 1-7.
- Hill, H. C. (2009, March). Fixing teacher professional development. *Phi Delta Kappan*, 90(7), 470-476.
- Kazemi, E., & Hubbard, A. (2008). New directions for the design and study of professional development: Attending to the coevolution of teachers' participation across contexts. *Journal of Teacher Education*, *59*(5), 428-441.
- Kimball, S. M. (2011). Human capital managers at every school. *Phi Delta Kappan*, 92(7), 13-18.
- King, F. (2011). The role of leadership in developing and sustaining teachers' professional learning. *Management in Education*, *25*(4), 149-155. doi: 10.1177/0892020611409791
- Luke, A., & McArdle, F. (2009). A model for research-based state professional development policy. *Asia-Pacific Journal of Teacher Education*, 37(3), 231-251.
- Maldonado, L., & Victoreen, J. (2002). *Effective professional development: Findings from research*. College Entrance Examination Board. Retrieved from http://apcentral.collegeboard.com
- Montoro, V. (2012). *Professional development, teacher learning, and national standards: A mixed-method, multiple-case study of the professional learning experiences of evangelical Christian school teachers.* (Unpublished doctoral dissertation). Andrews University, Berrien Springs, Michigan.
- Neuzil, L. M. (2010, Summer). Part II: Professional development activities and professional learning community in the mid-America region of the Association of Christian Schools International. *A Journal of the International Christian Community for Teacher Education*, 5(2). Retrieved from http://icctejournal.org/issues/v5i2/v5i2-neuzil/

- Neuzil, L. M., & Vaughn, M. (2010, Summer). An examination of professional development activities available to teachers in the mid-America region of the Association of Christian Schools International. *A Journal of the International Christian Community for Teacher Education*, *5*(2). Retrieved from http://icctejournal.org/issues/v5il/v5il-professional-development/
- Penuel, W. R., Fishman, B. J., Yamaguchi, R., & Gallagher, L. P. (2007). What makes professional development effective? Strategies that foster curriculum implementation. *American Educational Research Journal*, *44*(4), 921-958.
- Putnam, R. T., & Borko, H. (2000). What do new views of knowledge and thinking have to say about research on teacher learning? *Educational Researcher*, 29(1), 4-15.
- Wayne, A. J., Yoon, K. S., Zhu, P., Cronen, S., & Garet, M. S. (2008). Experimenting with teacher professional development: Motives and methods. *Educational Researcher*, *37*(8), 469-479.
- Weiss, I. R., & Pasley, J. D. (2006, March). *Scaling up instructional improvement through teacher professional development: Insights from the local systemic change initiative*. Policy Briefs. Consortium for Policy Research in Education, University of Pennsylvania, Graduate School of Education.
- Wilson, S. M., & Berne, J. (1999). Teacher learning and the acquisition of professional knowledge: An examination of research on contemporary professional development. *Review of Research in Education*, *24*, 173-209.
- Yoon, K. S., Duncan, T., Lee, S. W. Y., Scarloss, B., & Shapley, K. (2007). *Reviewing the evidence on how teacher professional development affects student achievement.* Washington, DC: U.S. Department of Education, Institute of Educational Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest.