

# Professional Learning in the Learning Profession

## A Status Report on Teacher Development in the U.S. and Abroad

### Technical Report



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**PROFESSIONAL LEARNING IN THE LEARNING PROFESSION  
A STATUS REPORT ON TEACHER DEVELOPMENT  
IN THE UNITED STATES AND ABROAD**

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# Preface

## CREATING EFFECTIVE PROFESSIONAL LEARNING SYSTEMS TO BOLSTER TEACHING QUALITY AND STUDENT ACHIEVEMENT

Stephanie Hirsh, Executive Director  
National Staff Development Council

For many years Title I of the Elementary and Secondary Education Act has required low-performing schools to set aside 10% of their allocations for schoolwide professional development. Title II funding has resulted in the allocation of more than \$3 billion to professional development. More than 40 states have adopted standards calling for effective professional development for all educators accountable for results in student learning. And several national studies on what distinguishes high-performing, high-poverty schools from their lower-performing counterparts consistently identify effective schoolwide collaborative professional learning as critical to the school's success. And yet as a nation we have failed to leverage this support and these examples to ensure that every educator and every student benefits from highly effective professional learning.

Improving professional learning for educators is a crucial step in transforming schools and improving academic achievement. To meet federal requirements and public expectations for school and student performance, the nation needs to bolster teacher skills and knowledge to ensure that every teacher is able to teach increasingly diverse learners, knowledgeable about student learning, competent in complex core academic content, and skillful at the craft of teaching.

To accomplish this, schools — with the support of school systems and state departments of education — need to make sure that professional learning is planned and organized to engage all teachers regularly and to benefit all students. This requires high-quality, sustained professional learning throughout the school year, at every grade level and in every subject.

In an effective professional learning system, school leaders learn from experts, mentors,

and their peers about how to become true instructional leaders. They 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 students' learning within a framework of high expectations.

Teachers meet on a regular schedule in learning teams organized by grade-level or content-area assignments and share responsibility for their students' success. Learning teams follow a cycle of continuous improvement that begins with examining student data to determine the areas of greatest student need, pinpointing areas where additional educator learning is necessary, identifying and creating learning experiences to address these adult needs, developing powerful lessons and assessments, applying new strategies in the

classroom, refining new learning into more powerful lessons and assessments, reflecting on the impact on student learning, and repeating the cycle with new goals as necessary.

The system at the school level is supported by state and federal policies that encourage regular teacher collaboration and professional learning closely tied with school improvement priorities and provides needed resources to give teachers time and opportunity to make this happen. Many states, including Kansas, Ohio, and Oregon most recently, have adopted standards to demonstrate expectations that all teachers engage in effective professional development. These states are among the 40 that have adopted or adapted NSDC's Standards for Staff Development written in conjunction with 17 other professional associations. Some states, such as Florida, Georgia, and Kansas, have implemented statewide assessment processes to determine the degree to which teachers experience effective professional development and student learning is impacted. Other states, notably Arkansas, Pennsylvania, and New Jersey, invest in capacity-building strategies providing training and resources for principals and teacher leaders. Ohio enacted sweeping reforms of its professional development policy. Stand-out high-poverty school systems like Long Beach (Calif.), Hamilton County (Tenn.), and Carmen-Ainsworth (Mich.), have made collaborative learning a priority to ensure that every educator and every student learns every day.

As this report shows, such an approach to professional learning has become the norm in many countries that are our competitors, but is the exception here. The report reveals that much of the professional development available today focuses on educators'

academic content knowledge, and pays growing attention to mentoring support, particularly for new teachers. But, overall, the kind of high-intensity, job-embedded collaborative learning that is most effective is not a common feature of professional development across most states, districts, and schools in the United States.

The purpose of this report is to provide policymakers, researchers, and school leaders with a teacher-development research base that can lead to powerful professional learning, instructional improvement, and student learning. By examining information about the nature of professional development opportunities currently available to teachers across the United States and in a variety of contexts, education leaders and policymakers can begin both to evaluate the needs of the systems in which teachers learn and do their work and to consider how teachers' learning opportunities can be further supported.

This volume is prepared by Ruth Chung Wei, Linda Darling-Hammond, Alethea Andree, Nikole Richardson, and Stelios Orphanos through the School Redesign Network at Stanford University. It can be downloaded at <http://www.nsd.org/stateproflearning.cfm> and at <http://www.srnleads.org>. The report is part of a larger study, *The Status of Professional Development in the United States*, a multi-year research initiative. Data and findings drawn from this study will be used to establish benchmarks for assessing progress in professional development over time.

Future reports will:

- Address the degree to which educators experience professional development linked to

improved professional practice and student learning, along with state-by-state comparison data, and

- Examine policies and contexts that support implementation of more effective professional learning tied to student learning in states and school systems.

Taken as a whole, this work will provide the most comprehensive picture and

far-reaching analysis of professional learning that has ever been conducted in the United States. NSDC has sponsored this initial report to synthesize what we know as a baseline to measure state and district performance. We hope that each report in the series will answer key questions about professional learning that will contribute to improved outcomes in teaching and learning in the United States.



# Introduction

In recent decades, school reform efforts have recognized teacher professional development as a key component of change and as an important link between the standards movement and student achievement. As students are expected to learn more complex and analytical skills in preparation for further education and work in the 21st century, teachers must learn to teach in ways that develop higher order thinking and performance. These new standards require a new kind of teaching, conducted by “teachers who understand learning as well as teaching, who can address students’ needs as well as the demands of their disciplines, and who can create bridges between students’ experiences and curriculum goals” (Darling-Hammond, 2005, p.5). Efforts to improve student achievement can succeed only by building the capacity of teachers to improve their instructional practice and the capacity of school systems to advance teacher learning.

Enabling educational systems to achieve on a wide scale the kind of teaching that has a substantial impact on student learning requires much more intensive and effective professional learning than has traditionally been available in the past. As states and districts work to create new structures and strategies for professional development, it is useful to evaluate what research has to say about the kind of professional learning that improves instruction and student achievement.

In this study, we examine the availability of both formal professional development and other opportunities for professional learning — such as common planning time, shared opportunities to examine student work, or tools for self-reflection — that may occur outside the bounds of formal professional development events. We conceptualize professional learning as a product of both externally-provided and job-embedded activities that increase teachers’ knowledge and change their instructional practice in ways that support student learning. Thus, formal professional development represents a subset of the range of experiences that may result in professional learning.

We recognize that professional development does not always lead to professional learning, despite its intent (Easton, 2008; Fullan, 2007a). Indeed, Michael Fullan (2007a) argues that external approaches to instructional improvement are rarely “powerful enough, specific enough, or sustained enough to alter the culture of the classroom and school” (p. 35). He reminds us of Richard Elmore’s (2004) assertion that “improvement above all entails ‘learning to do the right things in the setting where you work’” (p. 73). Likewise, Lois Brown Easton argues that the most powerful learning opportunities are active learning opportunities embedded in teachers’ work, which begins with teachers’ assessments of what their students need and, subsequently, what teachers identify as areas for their own learning. She contends:

It is clearer today than ever that educators need to learn, and that’s why *professional learning* has replaced *professional development*. Developing is not enough. Educators must be knowledgeable and wise. They must know enough in order to change. They must change in order to get different results. They must become

learners, and they must be self-developing (Easton, 2008, p. 756, emphasis in original text).

In this study, we first review what research says regarding the relationship between teacher professional development and student learning. We then we review the availability of the kinds of professional learning opportunities that research finds most effective in the United States and in high-achieving nations around the world. We illustrate with examples how key features of effective professional development contexts and strategies operate in these systems.

Using nationally representative data from the 2003-04 Schools and Staffing Survey (National Center for Education Statistics), we examine the availability of professional development and supports for learning to teachers nationally and across states to determine whether current policies and practices are aligned with what research evidence demonstrates are effective professional development. We also examine differences in professional development across

school contexts (e.g., grade level, location, different student populations) to determine whether there are differences in teachers' access to professional development in different types of school communities. Data from other surveys such as the MetLife Survey of the American Teacher, the National Education Association's Survey of America's Teachers and Support Professionals on Technology, and the National Staff Development Council's Standards Assessment Inventory are also examined to shed light on teachers' learning opportunities.

This report is intended to provide a research-based understanding of the types of professional development that support powerful professional learning, improve teacher instruction and, ultimately, promote excellent student learning. By examining both the customary practices and the promising practices of professional development, school leaders can create conditions in which teachers are well-supported to be effective in the classroom and to improve their effectiveness throughout their careers.

# Defining Effective Professional Development

In this review, we define “high quality” or “effective” professional development as that which results in improvements in teachers’ knowledge and instructional practice, as well as improved student learning outcomes. We emphasize research that links teacher development to student learning. While the impact on student achievement is a critical indicator of the effectiveness of professional development, we believe the impact of professional development on teacher knowledge and instructional practice is also relevant, as these are worthwhile outcomes in themselves that support increased learning for students. Since the impact of teacher learning on student achievement may not be immediate, and measures of student learning gains that can be linked to specific professional development are often difficult to secure, interim measures that examine practice are valuable, especially where the practices in question have been shown to influence student achievement.

This review of research includes studies that use a range of research methodologies. We chose not to limit our review to those studies that utilized experimental methods only, as there are important and valid research studies that draw on qualitative and case study methodologies. In these cases, we note that the inferences that can be drawn from such research should be treated as suggestive rather than conclusive.

Over the last two decades, a “new paradigm” for professional development has emerged from research that distinguishes powerful opportunities for teacher learning from the ineffective traditional one-day workshop model (Stein, Smith, and Silver, 1999). The research on effective professional development has begun to create a consensus about key principles in the design of learning experiences that can impact teachers’ knowledge and practices (e.g., Hawley & Valli, 1999; NSDC, 2001). While the various features of effective professional development are cited in the literature, there are several cross-cutting themes. This consensus includes lessons about both the content of and contexts for professional

learning, as well as approaches to designing learning experiences.

## Professional Development Content

The content of the professional development is most useful when it focuses on “concrete tasks of teaching, assessment, observation and reflection” (Darling-Hammond & McLaughlin, 1995, p. 598), rather than abstract discussions of teaching. Studies find strong effects of professional development on practice when it focuses on enhancing teachers’ knowledge of how to engage in specific pedagogical skills and how to teach specific kinds of content to learners. Equally important is a focus on student learning, including analysis of the conceptual understanding and skills that students will be expected to demonstrate (Blank, de las Alas & Smith, 2007; Carpenter et al, 1989; Cohen & Hill, 2001; Lieberman & Wood, 2002; Merck & Methven, 1991; Saxe, Gearhart & Nasir, 2001; Wenglinsky, 2000).

Hawley and Valli (1999) observe that while the focus on student learning is an obvious goal of teacher professional development,

## The National Staff Development Council (NSDC) Standards for Staff Development

The standards were developed by NSDC in conjunction with 17 professional associations to synthesize the research on effective professional development that results in changes for teachers and students. The standards point to specific practices and stances that those organizing and providing professional development can implement to produce stronger learning. Organized into context, process and content standards, NSDC standards reflect components of professional development that can be used to guide schools and school systems in the design and support of meaningful learning opportunities for educators. The standards have been adopted, adapted, or endorsed by 40 states, most recently Kansas and Oregon. NSDC developed resources and an assessment to assist schools, school districts, and states implement standards consistently so that professional development impacts teaching and student learning.

### Context Standards

Staff development that improves the learning of all students:

- Organizes adults into learning communities whose goals are aligned with those of the school and district. (Learning Communities)
- Requires skillful school and district leaders who guide continuous instructional improvement. (Leadership)
- Requires resources to support adult learning and collaboration. (Resources)

### Process Standards

Staff development that improves the learning of all students:

- Uses disaggregated student data to determine adult learning priorities, monitor progress, and help sustain continuous improvement. (Data-Driven)
- Uses multiple sources of information to guide improvement and demonstrate its impact. (Evaluation)
- Prepares educators to apply research to decision making. (Research-Based)
- Uses learning strategies appropriate to the intended goal. (Design)
- Applies knowledge about human learning and change. (Learning)
- Provides educators with knowledge and skills to collaborate. (Collaboration)

### Content Standards

Staff development that improves the learning of all students:

- Prepares educators to understand and appreciate all students, create safe, orderly and supportive learning environments, and hold high expectations for their academic achievement. (Equity)
- Deepens educators' content knowledge, provides them with research-based instructional strategies to assist students in meeting rigorous academic standards, and prepares them to use various types of classroom assessments appropriately. (Quality Teaching)
- Provides educators with knowledge and skills to involve families and other stakeholders appropriately. (Family Involvement)

*Source: National Staff Development Council (2001).*

teacher's competence. Saxe, Gearheart, and Nasir (2001) compared three types of support for teacher learning, and found that student achievement improved most when teachers were engaged in sustained, collaborative professional development that specifically focused on deepening teachers' content knowledge and instructional practices. The three teacher learning options included: traditional professional development workshops, a professional community-based activity which offered support to teachers using new curriculum units, and the Integrated Mathematics Assessment (IMA) approach, which directly engaged teachers in learning the mathematics in the new curriculum as well as facilitating discussion around pedagogical content knowledge necessary to teach the units. The researchers found that students whose teachers had participated in the Integrated Mathematics Assessment (IMA) program showed the greatest gains in conceptual understanding. The study's findings underscore the need for learning opportunities that focus on specific content knowledge and content pedagogy and "point to the problems with reform curriculum when such curriculum are not accompanied by focused supports for teachers' subject matter knowledge, knowledge of children's mathematics and implementation of reform-oriented pedagogical practices" (Saxe, Gearheart, and Nasir, 2001, p. 70).

Similar strategies for engaging teachers in learning about mathematics content and pedagogy in the Cognitively Guided Instruction (CGI) program produced changes in practice for teachers and outcomes for

students (Carpenter et al., 1989). Teachers learned about CGI strategies, studied mathematics curriculum together, looked at student learning, and developed a unit and a year long plan involving CGI instruction. CGI operates on the theory that if teachers understand how students think and learn, they can better predict what their students need and match instruction accordingly. The researchers found that, in comparison with control-group teachers, CGI teachers more often emphasized problem-solving

Taken together, these studies illustrate the importance of sustained, content-focused professional development for changing practice in ways that ultimately improve student learning.

skills, listened to students, expected students to use multiple strategies, and had greater knowledge of students' thinking. In comparison to control-group students, students in CGI classrooms demonstrated higher level problem-solving abilities and

greater recall of number facts, while performing comparably on basic skills tests.

Finally, in a study of classroom libraries and elementary-level literacy development, McGill-Franzen et al (1999) found that reading comprehension among students whose teachers had received 30 hours of professional development in reading instruction and library use in addition to donated-250 book classroom libraries, achieved at much higher levels than students whose teachers who simply received classroom libraries. Taken together, these studies illustrate the importance of sustained, content-focused professional development for changing practice in ways that ultimately improve student learning.

### Contexts for Learning

The literature also finds professional devel-

opment more effective when it is not approached in isolation — for example, as the traditional “flavor of the month” or one-shot workshop — but as a coherent part of the school reform effort (Elmore & Burney, 1997; Cohen & Hill, 2001; Garet et al, 2001; Penuel, Fishman, Yamaguchi, & Gallagher, 2007; Supovitz, Mayer & Kahle, 2000). For substantial change to occur, curriculum, assessment, standards, and professional learning should be seamlessly linked in order to avoid disjunctures between what teachers learn in professional development and what they are able to implement in their classrooms and schools. A statewide example from Ohio is NSF’s Discovery science professional development, which offered sustained support linked to system changes. Following six-week intensive content institutes, teachers were released by their districts for six seminars throughout the year that focused on grade-appropriate curriculum equity issues and authentic assessment strategies. In addition, they were provided on demand support and site visits from regional leaders, and contact with peers through newsletters and annual conferences. These efforts led to a significant increase in and continued use of inquiry-based instructional practices (Supovitz, Mayer, & Kahle, 2000).

Research on effective professional development highlights the importance of collaborative and collegial learning environments and communities of practice in schools (Knapp, 2003; Darling-Hammond & McLaughlin, 1995). Putnam and Borko (2000) call for a situated approach to teacher learning which grounds professional development in teachers’ own practices. This approach does not limit opportunities to the classroom context, but does require ways for new knowledge and skills developed in professional development to

be “intertwined with [teachers’] ongoing practice” (p. 6). In a review of effective professional development programs in middle schools, Killion (1999) found that when teachers participate in professional learning with peers from their school site, they become “engaged in a powerful form of staff development that allows them to grapple with “real” issues related to the new content and instructional processes” (p.180).

Collaborative approaches have been found to be effective in promoting school change that extends beyond individual classrooms (Hord, 1997; Joyce & Calhoun, 1996; Louis, Marks & Kruse, 1996; McLaughlin & Talbert, 2001; Newman & Wehlage, 1997; Perez et al, 2007). When whole grade levels, schools or departments are involved, they provide a broader base of understanding and support at the school level. Teachers create a critical mass for improved instruction and serve as support groups for each other’s improved practice. Collective work in trusting environments provides a basis for inquiry and reflection into teachers’ own practice, allowing teachers to take risks, solve problems and attend to dilemmas in their practice (Ball & Cohen, 1999; Bryk, Camburn & Louis, 1999; Lieberman & Wood, 2002; Little, 1993).

### **Design of Learning Experiences**

The design of professional development experiences must also address how teachers learn. Opportunities for active learning or “sense-making” activities are important (Snow-Renner & Lauer, 2005, p. 11). These often involve modeling the sought after practices and constructing opportunities for teachers to practice and reflect on the new strategies (Carpenter et al, 1989; Cohen & Hill, 2001; Garet et al, 2001; Desimone et al, 2002; Penuel, Fishman, Yamaguchi, &

Gallagher, 2007; Saxe, Gearhart & Nasir, 2001; Supovitz, Mayer & Kahle, 2000).

Active learning opportunities allow teachers to transform their teaching and not simply layer new strategies on top of the old. Cohen and Hill (2001) describe two active learning approaches that proved successful in California's statewide mathematics reform effort. During this reform, new curriculum and assessments were developed based on the framework established by the National Council of Teachers of Mathematics (NCTM). These required elementary teachers and students to understand complex concepts of mathematics, not simply computational skills and algorithms without context. The first professional learning activity was organized around new curriculum units developed to teach the new state standards, and it engaged teachers in learning the mathematics in the new curriculum units. Teachers taught the units and returned to debrief their experiences with other teachers and to problem solve next steps, while preparing to teach subsequent units. Teachers who attended these workshops over time reported more reform-oriented practices in their classrooms, and their schools showed larger gains in achievement.

Other effective professional development involved teachers evaluating student work on assessments directly linked to the reform curriculum. Student work was displayed in constructed response tasks that showed students' problem solving strategies and reasoning. While

assessing this work, teachers were guided through conceptual roadblocks students faced on the assessments and became knowledgeable about how to anticipate these misunderstandings and address them in their classrooms. When teachers reported having learned specifically about the new framework practices and having had opportunities to learn the mathematics they would ultimately teach, student achievement was higher.

Studies have found similar outcomes in other content areas. For example, Merek and Methven (1991) investigated the effects of elementary science teachers participating in a 100-hour long summer institute during which they actively engaged in the "learning cycle" students would complete in their classes. First students explore a phenomenon, then they create a conceptual invention, a self-developed explanation of what has occurred, and finally, expand the concept to new applications.

Following this active learning, teachers developed their own units and taught each other their science learning cycles before returning to their classrooms. The authors found that the reasoning ability of randomly selected students in the experimental classrooms was 44% higher than their peers in control classrooms.

Secondly, professional development that is sustained and intense has a greater chance of transforming teaching practices and student learning (Cohen & Hill, 2001; Desimone et al, 2002; Garet et al, 2001; McGill-Franzen et al 1999; Supovitz, May-

Collective work in trusting environments provides a basis for inquiry and reflection into teachers' own practice, allowing teachers to take risks, solve problems and attend to dilemmas in their practice.

er & Kahle, 2000, Weiss & Pasley, 2006). The traditional episodic and fragmented approach of traditional professional development does not afford the time necessary for learning that is “rigorous” and “cumulative” (Knapp, 2003).

As Garet and colleagues (2001) found in a recent national survey, when teachers have an opportunity to do “hands-on” work which enhances their knowledge of the content to be taught to students and how to teach it, and is aligned with the curriculum and local policies, they report a greater sense of efficacy. Furthermore, teachers who report gaining greater knowledge and skills through their professional development are also likely to report changing their teaching practices. This study also found that professional development is more likely to be viewed by teachers as effective if it is sustained over time and offers substantial contact hours, allowing more opportunities to engage in active learning, enable meaningful collaboration and focus on content, all of which enhance the acquisition of knowledge and skills.

While the duration of professional development is not the only variable that matters, there is evidence that teacher learning, and associated student learning, are associated with the number of contact hours. For example, two separate evaluations of professional development aimed at inquiry-based science teaching found that teachers who had 80 or more hours of science-related professional

development during the previous year were significantly more likely to use reform-based teacher instruction than teachers who had experienced fewer hours (Corcoran, McVay, & Riordan, 2003; Supovitz & Turner, 2000). Furthermore, increased student achievement was associated with more intense participation in the professional development for teachers and more exposure to the resulting reform-based teacher instruction (Banilower, 2002; Corcoran, McVay, & Riordan, 2003).

These findings are suggestive of effects, but cannot sustain strong causal claims. Few studies in this arena are designed to do so. For example, a recent National Mathematics Advisory Panel report (2008) concluded that the majority of studies of professional development were descriptive in nature and lacking in the methodological rigor needed to warrant causal inferences.

Most studies employed simple one-group pre-test/post-test designs without a comparison group. A recent review of research on two professional development initiatives in literacy produced similar conclusions (see Garet et al., 2008).

In their systematic review of studies on the effectiveness of teachers’ in-service professional development, Yoon and colleagues (2007) analyzed the findings from over 1,300 studies and evaluation reports addressing the impact of professional development on student learning, and identified only nine experimental or quasi-experimental studies using control groups with pre- and post-test designs that could evalu-

As research deepens our understanding of how teachers learn, many scholars have begun to place greater emphasis on job-embedded and collaborative teacher learning.



ate impacts on student achievement. Their review of these nine studies concluded that sustained and intensive professional development was related to student achievement gains. Specifically, five of six studies that offered substantial contact hours of professional development (ranging from 30 to 100 hours in total) spread out over six to 12 months showed a positive and significant effect on student achievement gains. The remaining three studies that involved limited amount of professional development (ranging from 5 to 14 hours in total) showed no statistically significant effect on student learning. Across the nine studies, the levels of professional development offered — an average of 49 hours in a year — boosted student achievement by approximately 21 percentile points.

The effects of professional learning experiences that are intense and focused on the work of teaching appear to support the “new paradigm” of professional development.

## TEACHER LEARNING IN PROFESSIONAL COMMUNITIES

As research deepens our understanding of how teachers learn, many scholars have begun to place greater emphasis on job-embedded and collaborative teacher learning. As part of and in addition to formal professional development opportunities, the literature increasingly describes how teachers learn by working with their colleagues in professional learning communities (PLCs), engaging in continuous dialog and examination of their practice and student performance to develop and enact more effective instructional practices. In ongoing opportunities for collegial work, teachers have an opportunity to learn about, try out and

reflect upon new practices in their specific context, sharing their individual knowledge and expertise.

Earlier, we drew a contrast between formal professional development that is provided through structured events — such as courses, workshops, conferences, and school visits — and job-embedded professional learning. The former are often provided by external experts while job-embedded learning opportunities often assume that expertise is internally located. However, the use of the term “formal” to describe traditional professional development approaches is not to suggest that the work of professional learning communities is wholly “informal.” We recognize that the organization of PLCs is becoming increasingly structured. Furthermore, the lines between formal and informal, as well as externally and internally-organized, learning opportunities are becoming deliberately, and perhaps usefully, blurred, as school-based coaching and local study groups may be attached to periodic workshops, institutes, and conferences.

Explicit efforts to develop professional learning communities in American schools must respond to the structural isolation that has given rise to the individualistic, conservative, and present-minded norms described in Lortie’s (1975) seminal study of teaching. Confined to the egg-crate model of classrooms and stymied by the resulting norms of privacy, the U.S. teaching occupation has historically offered little opportunity for collective teacher work. Thus, early efforts at creating occasions for teacher collaboration were often found to be differentially effective at focusing on practice and enabling teacher learning, as teachers and reformers did not always have images of how teachers could work and learn effectively together.

## JOINT WORK IN SCHOOL-BASED COMMUNITIES

To characterize what she observed occurring in productive teacher learning communities, Little (1990) developed a construct she termed joint work, which requires norms of mutual aid over privacy and “thoughtful, explicit examination of practices and their consequences” (p.520). Beyond other forms of collaboration, joint work involves shared responsibility for the work of teaching, collective conceptions of autonomy, support for teachers’ initiative and leadership with regard to professional practice, and group affiliations grounded in professional work. In concrete terms, joint work can be found in shared planning activities and collaboration on curriculum, when teachers work in grade level teams that share students or content goals, or when teachers observe and critique each other’s instruction based on a shared understanding of effective teaching and goals for student learning. Interdependence between teachers is cultivated through these activities. Little found that when teachers rely on each other to complete a task, it forces them to bare their practice publicly; this interaction provides opportunities to create a shared technical language and to agree upon sound practice.

Using this more complex understanding of the work that happens in effective collaboration, studies have attempted to understand how teacher communities that engage in joint work are formed and supported (Hord, 1997; Newman & Wehlage, 1997, Newman et al, 1996). In their study of 900 teachers in 24 nationally selected restructuring elementary, middle, and high schools, Louis, Marks, and Kruse (1996) examined the structural

and human resource conditions necessary for the possibility of teacher professional community. They found that smaller school size, and common planning time were key in providing opportunities for teachers to form professional communities, as were supportive leadership, mutual respect steeped in strong professional knowledge, and a climate that invites risk taking and innovation. They also found that lower staffing complexity (i.e. more staff who are directly involved in teaching and learning) and the empowerment of teachers as decision makers were strongly highly correlated with professional community.

These features are consistent with those identified in a review of research regarding the construction of professional learning communities that can elicit the collaboration necessary for teacher learning and student improvement (Hord, 1997). Five attributes of effective professional communities were identified, including supportive and shared leadership, collective creativity, shared values and vision, supportive conditions and shared personal practice.

These larger structures give some idea of the prerequisites for professional community, but a finer lens is required to examine the types of interactions and processes in communities that foster teacher learning. In order to understand the dynamics that allow effective collaboration to occur, scholars have conducted many case studies of teacher professional communities that take on the “optimistic premise” (Little, 2003, p. 938) that communities play a critical role in teacher development, and look closely at what processes and interactions serve as precursors for teacher learning (Achinstein, 2002; Grossman, Wineberg, and Woolworth, 2001; Hollins et al, 2004; Horn, 2005; Little, 2003).

In documenting the slow and deliberate progress of forming a professional community among high school social studies and English teachers in one school, Grossman, Wineberg, and Woolworth (2001) found that, although participants were initially reluctant to break through established norms of autonomy and individuality, the group's purpose — the creation of interdisciplinary curriculum — became the basis for meaningful joint work. They identified particular markers for the development of community, including communal responsibility for individual growth, a formation of group identity and norms of interaction, and a productive use of difference and conflict.

Little (2003) studied three different school-based departmental and grade-level teacher communities to understand the specific dynamics between colleagues that enable teacher communities to become intellectual, social, and material resources for teacher growth and learning. Through observations, interviews, school documents and audio and videotaped records of interaction among teachers in school, Little found that learning occurred as teachers learned to describe, defend, and adjust their practices according to an emerging, collectively held standard of quality teaching. She observed that teacher communities initially faced some difficulty in determining a shared purpose for the group, and in ensuring that all members participated and benefited equally. Furthermore, she found that when teachers first shared experiences of their

practice they were often “decontextualized, disembodied accounts of the classroom” and were not a rich resource for learning. However, the potential for learning grew as teachers attempted to “recontextualize” practice as a group and as they discussed student work, curriculum, and instructional choices as ways to improve practice.

When teachers rely on each other to complete a task, it forces them to bare their practice publicly; this interaction provides opportunities to create a shared technical language and to agree upon sound practice.

While qualitative studies have sought to examine how professional communities are formed and how they operate, a number of large-scale studies have illustrated how collaborative, job-embedded, professional learning that

is focused on student performance has resulted in changed practices and improved student achievement (Bryk et al, 1999; Calkins, Guenther, Belfiore, & Lash, 2007; Goddard, Goddard & Tschannen-Moran, 2007; Louis & Marks, 1998; Supovitz & Christman, 2003). In a comprehensive five-year study of 1500 restructuring schools, Newmann & Wehlage (1997) analyzed three sets of data (School Restructuring Study, National Educational Longitudinal Study, and Study of Chicago School Reform) to understand how various reforms influence improved educational experiences for students. In their findings the authors link successful professional learning communities to reduced dropout rates among students, lower absenteeism rates, academic achievement gains in math, science, history, and reading. A final important finding was that particular characteristics of strong professional community — that is shared intellectual purpose and a sense of collective responsibility for student learn-

ing — reduced the “traditionally strong relationship between socioeconomic status and achievement gains in mathematics and science” (p. 37).

As we describe below, job-embedded, professional learning reflecting Little’s concept of joint work can take several forms that result in changes in teaching practices and, in some studies, measured increases in student achievement (for a review, see Vescio, Ross and Adams, 2008). In each of these forms, teachers engage in group processes around a concrete enterprise that results in shared learning (Ball and Cohen, 1999; Little, 1990; Putnam & Borko, 2000; Wenger, 1998).

### **Peer Observations of Practice**

A regular practice of teachers in professional communities is visiting and observing each others’ classrooms. Peers provide feedback and assistance to support individual learning, community improvement and ultimately student learning (Hord, 1997). Critical Friends Groups trained to use protocols designed by the National School Reform Faculty have successfully engaged in this type of professional learning. A study relying on observations and interviews of teachers using the protocols in 12 schools revealed noticeable changes in practice. Teachers’ instruction became more student-centered, with a focus on ensuring that students gained mastery of the subject as opposed to merely covering the material. In survey responses, teachers in these schools also reported having more opportunities to learn and a greater desire to continuously develop more effective practices than teachers not participating in Critical Friends Groups (Dunne, Nave & Lewis, 2000). Teachers can also use videotapes of teaching as a way to make aspects of their practice public and open to peer critique,

learn new practices and pedagogical strategies, and analyze aspects of teaching practice that may be difficult to capture otherwise (Sherin, 2004). This kind of work in contexts like National Board Certification has been found to change teachers’ practices, their knowledge, and their effectiveness (Lustick & Sykes, 2006; Sato, Chung, & Darling-Hammond, 2008; Vandevoort, Beardsley, & Berliner, 2004).

### **Analyzing Student Work and Student Data**

The focus of productive professional learning communities is often an examination of student work. Analyzing student work together allows teachers opportunities to develop a common understanding of what good work is, what common misunderstandings students have and what instructional strategies may or may not be working and for whom (Ball and Cohen, 1999; Dunne, Nave & Lewis, 2000; Little, 2003). A study investigating three high achieving schools that have continuously ‘beaten the odds’ on standardized tests found that teachers’ use of multiple student data sources to collectively reflect upon and improve instructional practices in team meetings contributed to increases in student achievement (Strahan, 2003).

### **Developing Study Groups**

A range of studies suggest that when teachers in professional communities study practice and research together, they can support one another in implementing new ideas (Killion, 1999, 2002a, 2002b; Hollins et al, 2004). For example, a case study of a successfully reforming middle school describes a community that transformed its practice by reading and discussing educational research. Teachers used what they learned in their study groups to improve their assessment practices, raise expectations for

traditionally underperforming groups, and create curriculum that was relevant and engaging. In interviews, teachers and administrators reported that these activities and other collaborative work led to the observed increase in student achievement in mathematics and reading (Phillips, 2003).

In a study of an intervention in another inner-city elementary school, Hollins et al. (2004) report that teachers who engaged in a structured dialogue to solve problems of literacy learning ultimately researched and adopted new practices which influenced student achievement.

The inquiry groups participated in a five-step process in which they identified challenges, selected approaches to meet the challenge, implemented the approach, evaluated the approach and then formulated a theory for future practice based on their experiences.

Over the course of the two-year examination of these study groups through observations and interviews, the authors found that teachers developed more positive views of their students' abilities, engaged in meaningful collaboration to develop new instructional strategies, and adopted more successful practices.

## LEARNING FROM PROFESSIONAL COMMUNITY BEYOND THE SCHOOL

Positive effects of professional communities that operate beyond the school level have been documented by a number of researchers (Darling-Hammond & McLaughlin, 1995; Fullan, 1991). These are often or-

ganized via networks that connect teachers around subject matter or other shared educational concerns. Lieberman and Wood (2002) reported on the work of the National Writing Project (NWP), one of the most successful teacher networks, to understand how teacher learning in a community can be a source of efficacy and confidence. The NWP first focuses on creating community amongst a small group of teachers during a five-week summer institute in which teachers engage in writing, share their work, and critique their peers. In the process of making their work public and critiquing others,

teachers learn how to make implicit rules and expectations explicit, and how to give and receive constructive feedback for students.

In addition, the authors found that the institutes, which were designed to promote risk taking and collaboration, provided a foundation for ongoing

learning for teachers once they left. Newsletters, annual conferences and opportunities to lead workshops were catalysts for the continuous engagement of those teachers with each other and with teachers in their home contexts, creating the intersection of professional learning communities within the school and across the profession.

In her study of two high school math departments, Horn (2005) also found productive intersections between the professional development programs the math teachers participated in beyond the school (a Complex Instruction training and professional development for using graphing calculators) and their in-school collaboration. She

Teachers who engaged in a structured dialogue to solve problems of literacy learning ultimately researched and adopted new practices which influenced student achievement.

concluded that the teachers' school-based "collegial conversations seemed to serve the important purpose of providing discursive and interactional tools for actually implementing some of these [professional development] ideas in their classrooms with students" (p. 232).

Each of these studies augments our knowledge of how to create collaborative professional communities that are, as Westheimer (1999) notes, truly *collective* — challenging the whole school to change practices for student achievement — rather than merely *liberal* — maintaining individual teachers' autonomy. The difference lies in a group's ability to engage in truly joint work, which makes practice public and open to critique, and to develop a collective understanding of what constitutes sound practice. The success of professional community as a lever for teacher learning requires attention to the processes of making practice public and to the creation of structures which make this possible and desirable.

## SCHOOL-BASED COACHING

One strategy that combines some features of traditional professional development with the need for learning about practice *in* practice is the use of school-based coaches. With an increased focus on improving literacy and mathematics instruction in elementary schools, many school districts and providers of professional development have used coaches to tighten the connection between the training they provide in external institutes and teachers' application of the strategies in their classrooms. Coaching models recognize that if professional development is to take root in teachers' practice, on-going and specific follow-up is necessary to help teachers incorporate new knowledge and skills into classroom practice both

in the short and long term (Guskey, 2000; Garet et al, 2001). Russo (2004) describes school-based coaching in this way:

[S]chool-based coaching generally involves experts in a particular subject area or set of teaching strategies working closely with small groups of teachers to improve classroom practice and, ultimately, student achievement. In some cases coaches work full-time at an individual school or district; in others they work with a variety of schools throughout the year. Most are former classroom teachers, and some keep part-time classroom duties while they coach (p.1).

Many experts note that successful coaching should be offered by accomplished peers and should include "ongoing classroom modeling, supportive critiques of practice, and specific observations" (Poglinco et al., 2003, p.1; see also Showers & Joyce, 1996).

In a review of the literature on coaching conducted as part of an Institute for Education Sciences evaluation of the Reading First program, Deussen and colleagues (2007) reported mixed findings of the literature on the impact of coaching on instructional practice, which may be associated with variability in coaching quality as a function of both coaches' expertise and coaching practices. Several comparison-group studies provide evidence that teachers who receive coaching are more likely to enact the desired teaching practices and apply them more appropriately than those receiving more traditional professional development (Showers and Joyce, 1996; Neufeld and Roper, 2003; Knight, 2004; Kohler, Crilley, Shearer, and Good, 1997).

On the other hand, a study conducted in the Netherlands (Veenman, Denessen, Gerrits, and Kenter, 2001) found that, while teachers who had been coached felt more confident in their teaching, they were not rated as more effective than teachers who had not been coached. Another small scale study found that teachers who had received coaching on particular strategies did not necessarily know when it was appropriate to select one instructional strategy over another (Gutierrez, Crosland, and Berlin, 2001). It is likely that the knowledge base in which coaching is embedded also matters to its outcomes.

Several evaluations have suggested that there is a link between coaching models of professional development linked to reforms in literacy instruction. For example, Norton (2001) cites impressive achievement gains of students whose school participated in the Alabama Reading Initiative, which utilized a school-based coaching model following an intensive 2-week summer institute to provide ongoing support to teachers implementing the new literacy approach. More recently, Blachowicz, Obrochta, and Fogelberg (2005) reported that as a result of a differentiated literacy program and other interventions that utilized a coaching model, the percentage of students meeting benchmark standards in an Illinois district increased markedly. In a study by the Foundation for California Early Literacy Learning, teachers reported that the coaching they received had a positive effect on student achievement (Schwartz & Mc-

Carthy, 2003). Likewise, Lyons and Pinnell (2001) linked achievement gains in reading and writing to literacy coaching. None of these studies, however, employed comparison-group methods with sufficient controls and on a large enough scale to establish a causal link between coaching and student achievement. More research is necessary to establish these relationships.

## MENTORING AND COACHING DURING INDUCTION

A special subset of coaching and mentoring strategies, along with other supports, has been developed as part of induction programs for new teachers. Requirements for such programs have been adopted in more than 30 states, and often serve as the primary source of professional development for teachers in the first years of their careers.

In their review of the impact of induction programs, Ingersoll and Kralik (2004) found that mentoring programs increase teacher retention (Cheng & Brown, 1992; Odell & Ferraro, 1992; Spuhler & Zetler, 1995; Henke

et al., 2000; Fuller, 2003). Some research also suggests that well developed induction programs, which include mentors who have structured time with beginning teachers and receive training directly related to beginning teachers' immediate needs, can increase teacher retention rates and improve the rated performance of the retained teachers (Bartell, 1995; Smith & Ingersoll, 2004; Olebe, 2001).

In the process of making their work public and critiquing others, teachers learn how to make implicit rules and expectations explicit, and how to give and receive constructive feedback for students.

In a recent review of the literature on teacher induction, Wang, Odell and Schwille (2008) organized the research into three genres based on how outcomes were measured: 1) consistency of reported induction practices with theoretical assumptions about high quality induction; 2) teachers' reports of learning; 3) changes in teaching practice and student achievement. They found a number of studies in which induction practices were compared with theoretical assumptions about effective induction and studies in which teachers reported changes in their ideas about teaching, but few that assessed beginning teachers' changes in instructional practice or the impact on student achievement.

In line with other research on professional development, collegial, job-embedded models of support appeared to have more effect on practice than traditional workshop models of training.

The two case studies of workshop-based induction included in the 2008 review by Wang, Odell, and Schwill (Barret at al., 2002; Franke et al., 1998) found no substantial impact on beginning teachers' practices. On the other hand, two case studies of collaboration-based models found, in one case, effects on beginning teachers' enactment of student-centered science teaching (Eick, 2002), and, in the case of collaborative preservice training program, continued collaboration in the cause of professional learning, even when new teachers' school contexts did not support a collaborative culture (Rolheiser & Hundey, 1995).

In line with other research on professional development, collegial, job-embedded models of support appeared to have more effect on practice than traditional workshop models of training.

A few studies looked at mentoring programs (Luft & Cox, 2001; Hall, Johnson & Bowman, 1995) and found that beginning teachers believed the most valuable components of induction were interacting with and receiving feedback from mentors and observing and being observed by their colleagues. However, these studies did not examine the effects on teachers' practices or their students' learning. Other studies of the impact of mentoring have found little effect of mentoring relationships on teachers' enactment of desired pedagogical strategies in math (Pourdavood, Grob, Clark, and Orr, 1999; Holohan, Jurkat & Friedman, 2000). Researchers have suggested that effective mentoring may require mentor teachers to receive training in both mentoring techniques and the teaching practices that their mentees are expected to learn (Evertson & Smithey, 2000), as well as support from

school administrators for mentors' work and the new teaching approaches (Holohan, Jurkat & Friedman, 2000).

Another concern is that many induction programs operate under a generic conception of mentoring and do not match teachers by subject area. Some

studies suggest that a subject matter fit and focus may be important. For example, Luft, Roehrig, and Patterson (2003) found that induction programs that focused on subject-specific pedagogy were better able to support beginning teachers' learning of curriculum standards than those with general pedagogy as the focus. With respect to teacher retention, Smith and Ingersoll's (2004) analysis of the Schools and Staffing



Survey found strong links between the type of induction support received and whether novice teachers stayed in their schools. The types of induction supports most strongly associated with higher retention rates were a mentor in the same subject area, common planning time with teachers in the same subject, regularly scheduled collaboration with other teachers, and being part of a network of teachers. Teacher attrition was reduced by half when teachers received comprehensive induction supports.

One of the difficulties in evaluating the design and effects of induction programs is the lack of information about program design and the wide variability in implementation, coupled with the fact that a wide variety of models are now widespread, so that clean comparisons between treatments are difficult. These problems were evident in a report released in October 2008, on results from the first year of a longitudinal randomized control group study of the impact of a teacher induction program offering

mentoring, teacher observations, formative assessments, and professional development workshops across 17 districts, compared to the districts' regular induction programs. The study sought to examine effects on classroom practices, student achievement, and teacher mobility (Glazerman, et al., 2008). There were no statistically significant differences in teacher practices, student test scores, or teacher retention between the two groups of teachers; however, it is difficult to draw useful generalizations about induction from these results, since both the "treatment" and comparison groups received substantial support, and there was so much variability in the participation of those who were in the program under study that a common treatment was lacking. The results of this study as well as the research review by Wang, Odell, and Schulle (2008) highlight the need for more rigorous studies of the impact of induction models and components on beginning teachers' instructional practice, student achievement, and retention.

# Professional Development in the U.S. and Abroad

Unfortunately, while there is greater understanding of what constitutes high-quality professional development, and while more such opportunities are gradually being offered in the United States, surveys find that well-designed opportunities are not representative of most U.S. teachers' professional development experiences (Blank, de las Alas, & Smith, 2007). For example, in analyzing national survey results, Birman and colleagues (2007) found that mathematics teachers averaged 8 hours of professional development on how to teach mathematics and 5 hours on the "in-depth study" of topics in the subject area during 2003-04. Fewer than 10% experienced more than 24 hours of professional development on mathematics content or pedagogy during the year.

Even the more intensive professional development activities offered by the Eisenhower professional development grants for mathematics and science teachers generally lasted less than a week and included, on average, only 25 contact hours. Most activities did not emphasize collegial work among teachers (Garet, et al., 1999), in part because most schools still lack structures for collective work on problems of practice.

Meanwhile, the supports for effective professional learning we have described above are commonly available in nations that have been recognized as high achieving on international measures such as PISA (Programme for International Student Assessment) and TIMSS (Third International Math and Science Study). In this review of professional development policies and practices abroad, we focus on those nations that have been top ranked in either the PISA or the TIMSS assessment programs. Understanding more about how other nations are succeeding can suggest how systems that support teaching and learning are constructed. See Table 1 (p. 19) for the 2006 PISA rankings. (Note that Singapore and Hong Kong do not participate in PISA but are top ranked on the TIMSS.)

We found a number of common features characterizing professional development practices in high achieving countries:

- Extensive opportunities for both formal and informal in-service development;
- Time for professional learning and collaboration built into teachers' work hours;
- Professional development activities that are embedded in teachers' contexts and that are ongoing over a period of time;
- School governance structures that support the involvement of teachers in decisions regarding curriculum and instructional practice;
- Teacher induction programs for new teachers with release time for new teachers and mentor teachers, and formal training for mentors.

While we are unable to draw causal inferences about the relationship between these features of professional development

**TABLE 1. PISA (PROGRAM IN INTERNATIONAL STUDENT ASSESSMENT)  
SCORES AND RANKINGS BY COUNTRY, 2006**

Country	Mean Score Science	Country Rank in Science	Mean Score Math	Country Rank in Math
FINLAND	563	1	548	1
CANADA	534	2	527	5
JAPAN	531	3	523	6
NEW ZEALAND	530	4	522	7
AUSTRALIA	527	5	520	9
NETHERLANDS	525	6	531	3
KOREA	522	7	547	2
GERMANY	516	8	504	14
UNITED KINGDOM	515	9	495	18
CZECH REPUBLIC	513	10	510	11
SWITZERLAND	512	11	530	4
AUSTRIA	511	12	505	13
BELGIUM	510	13	520	8
IRELAND	508	14	501	16
HUNGARY	504	15	491	21
SWEDEN	503	16	502	15
OECD AVERAGE	500	NA	498	NA
POLAND	498	17	495	19
DENMARK	496	18	513	10
FRANCE	495	19	496	17
ICELAND	491	20	506	12
UNITED STATES	489	21	474	25
SLOVAK REPUBLIC	488	22	492	20
SPAIN	488	23	480	24
NORWAY	487	24	490	22
LUXEMBOURG	486	25	490	23
ITALY	475	26	462	27
PORTUGAL	474	27	466	26
GREECE	473	28	459	28
TURKEY	424	29	424	29
MEXICO	410	30	406	30

*Source: Organisation for Economic Cooperation and Development (2007), Programme for International Student Assessment 2006: Science Competencies for Tomorrow's World. Paris: OECD. Retrieved from <http://www.pisa.oecd.org/dataoecd/30/17/39703267.pdf>.*

practice in high achieving nations and the achievement levels of students in those countries, the common features of professional development practices found in these

nations and the research base supporting the effectiveness of these practices suggest that there may be some connection between the opportunities for teacher development

and the quality of teaching and learning that result.

### **Time for Professional Learning and Collaboration**

One of the key structural supports for teachers engaging in professional learning is the allocation of time in teachers' work day and week to participate in such activities. In most European and Asian countries, instruction takes up less than half of a teacher's working time (NCTAF, 1996, and OECD, 2007). The rest of teachers' working time — generally about 15 to 20 hours per week — is spent on tasks related to teaching like preparing lessons, marking papers, meeting with students and parents, and working with colleagues. Most planning is done in collegial settings, in the context of subject matter departments, grade level teams, or the large teacher rooms where teachers' desks are located to facilitate collective work.

By contrast, U.S. teachers generally have from 3 to 5 hours a week for lesson planning, usually scheduled independently rather than jointly with colleagues (NCTAF, 1996). U.S. teachers also average far more net teaching time in direct contact with students (1080 hours per year) than any other member of the Organisation for Economic Cooperation and Development (OECD). By comparison, the OECD average is only 803 hours per year for primary schools and 664 hours per year for upper secondary schools (OECD, 2007). U.S. teachers spent about 80% of their total working time teaching students as compared to about 60% for teachers in these other nations, who thus have much more time to plan and learn together, and to develop high-quality curriculum and instruction.

In South Korea — much like Japan and

Singapore — only about 35% of teachers' working time is spent teaching pupils. Teachers work in a shared office space during out-of-class time, since the students stay in a fixed classroom while the teachers rotate to teach them different subjects. The shared office space facilitates sharing of instructional resources and ideas among teachers, which is especially helpful for new teachers (Kang & Hong, 2008).

These practices are also found in European nations. For example, in Denmark, Finland, Hungary, Italy, Norway, Switzerland and the Flemish community of Belgium, schools provide time for regular collaboration among teachers on issues of instruction (OECD, 2004). Teachers in Finnish schools meet one afternoon each week to jointly plan and develop curriculum and schools in the same municipality are encouraged to work together to share materials.

A majority of schools in high-achieving nations also provide time for teachers' professional development by building it into teachers' work day and/or by providing class coverage by other teachers. Among OECD nations, more than 85% of schools in Belgium, Denmark, Finland, Hungary, Ireland, Norway, Sweden, and Switzerland provide time for professional development in teachers' work day or week (OECD, 2004). When time for professional development is built into teachers' working time, their learning activities can be ongoing and sustained, and can focus on a particular issue or problem over time.

Job-embedded, professional learning time also supports the kind of context-specific professional learning and action research that has been found to be more effective in catalyzing improvements in teaching practice. Active research on a topic related

## Japan's Lesson Study Approach to Professional Development

In Japan *kenkyuu jugyou* (research lessons) are a key part of the learning culture. Every teacher periodically prepares a best possible lesson that demonstrates strategies to achieve a specific goal (e.g., students becoming active problem-solvers or students learning more from each other) in collaboration with other colleagues. A group of teachers observe while the lesson is taught and usually record the lesson in a number of ways, including videotapes, audiotapes, and narrative and/or checklist observations that focus on areas of interest to the instructing teacher (e.g., how many student volunteered their own ideas). Afterwards, the group of teachers, and sometimes outside educators, discuss the lesson's strengths and weakness, ask questions, and make suggestions to improve the lesson. In some cases the revised lesson is given by another teacher only a few days later and observed and discussed again (Fernandez, 2002; Pang, 2006; Barber & Mourshed, 2007).

Teachers themselves decide the theme and frequency of research lessons. Large study groups often break up into subgroups of 4-6 teachers. The subgroups plan their own lessons but work toward the same goal and teachers from all subgroups share and comment on lessons and try to attend the lesson and follow-up discussion. For a typical lesson study, the 10-15 hours of group meetings are spread over 3-4 weeks. While schools let out between 2:40 and 3:45 pm, teachers' work days don't end until 5:00 pm, which provides additional time for collegial work and planning. Most lesson study meetings occur during the hours after school lets out. The research lessons allow teachers to refine individual lessons, consult with other teachers and receive feedback based on colleagues' observations of their classroom practice, reflect on their own practice, learn new content and approaches, and build a culture that emphasizes continuous improvement and collaboration (Fernandez, 2002).

to education is fairly common in Western European schools where professional development time is built into the teachers' work time. In Denmark, Finland, Italy, and Norway, teachers participate in collaborative research and/or development on topics related to education both in their pre-service preparation and in their ongoing work on the job (OECD, 2004). Similarly, England, Hungary, and Ontario (Canada) have created opportunities for teachers to engage in

school-focused research and development. Teachers are provided time and support for studying and evaluating their own teaching strategies and school programs and in sharing their findings with their colleagues, and through conferences and publications (OECD, 2005).

A highly developed practice in Japan and China — one that is now spreading to other nations — is the “research lesson”

(or “lesson study”) approach to professional inquiry. (see “Japan’s Lesson Study Approach,” p. 21.) When engaged in lesson study, groups of teachers observe each other’s classrooms and work together to refine individual lessons, expediting the spread of best practices throughout the school (Barber & Mourshed, 2007).

Some teachers also provide public research lessons, which expedites the spread of best practices across schools, allows principals, district personnel, and policymakers to see how teachers are grappling with new subject matter and goals, and gives recognition to excellent teachers (Fernandez, 2002).

### **Formal Professional Development**

In addition to ongoing work to improve practice that is supported within schools, many high-achieving nations also organize extensive professional development that draws on expertise beyond the school. While relatively few countries have established national professional development requirements, Singapore, Sweden and the Netherlands require at least 100 hours of professional development per year, beyond the many hours spent in collegial planning and inquiry (OECD, 2005 and Barber & Mourshed, 2007).

This emphasis on professional development requires significant investment on the part of the ministries of education. In Sweden, 104 hours or 15 days a year (approximately 6% of teachers’ total working time) are allocated for teachers’ inservice training (OECD, 2005), and in 2007, the national government appropriated a large grant to establish a teachers’ in-service training program called “lifting the teachers.” The grant pays the tuition for one university course for all compulsory school and pre-school teachers, and will support 80% of a

teacher’s salary while the teacher works in a school for 20% of her time and studies in a university post-graduate program for the remaining time (K. Ronnerman, personal communication, June 23, 2008).

After their fourth year of teaching, South Korean teachers are required to take 90 hours of professional development courses every 3 years. Also, after 3 years of teaching teachers are eligible to enroll in a 5-week (180 hour) professional development program approved by the government to obtain an advanced certificate, which provides an increase in salary and eligibility for promotion (Kang & Hong, 2008).

In Singapore, the government pays for 100 hours of professional development each year for all teachers in addition to the 20 hours a week they have to work with other teachers and visit each others’ classrooms to study teaching. Currently teachers are being trained to undertake action research projects in the classroom so that they can examine teaching and learning problems, and find solutions that can be disseminated to others. (See “Singapore’s Investment in Teacher Professional Learning,” p. 23.) With government funding, teachers can take courses at the National Institute of Education toward a master’s degree aimed at any of three career ladders that help them become curriculum specialists, mentors for other teachers, or school principals. These opportunities build their own expertise and that of the profession as a whole, as their work in these roles supports other teachers.

A few countries have established national training programs. For example, England instituted a national training program in best-practice training techniques, which coincided with a subsequent rise in the percentage of students meeting the target

## Singapore's Investment in Teacher Professional Learning

**A**mong its many investments in teacher professional learning is the Teacher's Network, established in 1998 by the Singapore Ministry of Education as part of Prime Minister Goh Chok Tong's new vision, "Thinking Schools, Learning Nation." This vision aims to produce life-long learners by making schools a learning environment for everyone from teachers to policy makers and having knowledge spiral up and down the system. The Teacher's Network's mission is to serve as a catalyst and support for teacher-initiated development through sharing, collaboration, and reflection. The Teacher's Network has six main interrelated components: (1) learning circles, (2) teacher-led workshops, (3) conferences, (4) well-being program, (5) a website, and (6) publications (Tripp, 2004; Salleh, 2006).

In a Teacher's Network learning circle 4-10 teachers and a facilitator collaboratively identify and solve common problems chosen by the participating teachers using discussions and action research. The learning circles generally meet for eight two-hour sessions over a period of 4-12 months. Supported by the national university, Teacher's Network professional development officers run an initial whole-school training program on the key processes of reflection, dialogue and action research and a more extended program to train teachers as learning circle facilitators and mentor facilitators in the field. A major part of the facilitator's role is to encourage the teachers to act as co-learners and critical friends so that they feel safe to take the risks of sharing their assumptions and personal theories, experimenting with new ideas and practices, and sharing their successes and problems. Discussing problems and possible solutions in learning circles fosters a sense of collegiality among teachers and encourages teachers to be reflective practitioners. Learning circles allow teachers to feel that they are producing knowledge, not just disseminating received knowledge (Tripp, 2004; Salleh, 2006).

Teacher-led workshops provide teachers an opportunity to present their ideas and work with their colleagues in a collegial atmosphere where everyone, including the presenter, is a co-learner and critical friend. Each workshop is jointly planned with a Teacher's Network professional development officer to ensure that everyone will be a co-learner in the workshop. The presenters first prepare an outline of their workshop, then the professional development officer helps the presenters surface their tacit knowledge and assumptions and trains them in facilitation so that they do not present as an expert with all the answers, but share and discuss the challenges they face in the classroom. The process is time consuming, but almost all teacher presenters find that it leads to them grow professionally (Tripp, 2004).

literacy standards from 63% to 75% in just three years (Barber & Mourshed, 2007). The training program is part of the National Literacy Strategy (NLS) and National Numeracy Strategy (NNS), which provide resources to support implementation of the national curriculum frameworks. These include packets of high quality teaching materials, resource documents, and videos depicting good practice. A “cascade” model of training — similar to a trainer of trainers model — is structured around these resources to help teachers learn and use productive practices. The National Literacy and National Numeracy Centers provide leadership and training for teacher training institutions and consultants, who train school heads, coordinators, lead math teachers and expert literacy teachers, who in turn support and train other teachers (Fullan, 2007b; Earl, Watson, & Torrance, 2002).

As more teachers become familiar with the strategies, expertise is increasingly located at the local level with consultants and leading mathematics teachers and literacy teachers providing support for teachers (Earl, Watson, & Torrance, 2002). In 2004, England began a new component of the Strategies designed to allow schools and local education agencies to learn best practices from each other by funding and supporting 1,500 groups of six schools each (Fullan, 2007b).

Since 2000, the Australian government has been sponsoring the Quality Teacher

Programme, a large scale program that provides funding to update and improve teachers’ skills and understandings in priority areas and enhance the status of teaching in both government and non-government schools. The Programme operates at three levels: (1) Teaching Australia (formerly the National Institute for Quality Teaching and School Leadership); (2) National Projects; and (3) State and Territory Projects. Teaching Australia facilitates the development and implementation of nationally agreed upon teaching standards, conducts research and communicates research findings, and facilitates and coordinates professional development courses. The National Projects have a national focus

Many countries offer professional development programs specifically for new teachers, and induction programs are mandatory in many countries, including Australia, France, Greece, Israel, Italy, Japan, Korea, New Zealand, and Switzerland.

and include programs designed to identify and promote best practice, support the development and dissemination of professional learning resources in priority areas, and develop professional networks for teachers and school leaders. The State and Territory Projects fund a wide variety of professional learning activities for teachers and school leaders under agreements with state and territory education authorities. The State and Territory Projects allow professional development activities to be tailored to local needs and include school-based action research and learning, conferences, workshops, on-line or digital media, and training of trainers, school project and team leaders (Skilbeck & Connell, 2003; Atelier Learning Solutions, 2005).



In 2002, Western Australia initiated the Getting it Right (GiR) Strategy, which provides specialist teaching personnel, professional development, and support to select primary schools across the school system. The strategy is intended to improve literacy and numeracy outcomes of high needs students, with a focus on Aboriginal students and other students at risk of not making satisfactory progress, to achieve a greater parity of outcomes for all groups of students (Meiers, et.al., 2006). Each school selects a highly regarded teacher with interest and expertise in numeracy or literacy to be a Specialist Teacher (ST), who is then trained through a series of seven three-day intensive workshops over the course of their initial two-year appointment. The Specialist Teacher works “shoulder to shoulder” with teachers in their schools, for about half a day each week for each teacher. The Specialist Teachers monitor and record student learning, help teachers analyze student performance data and set performance goals for underperforming students, model teaching strategies, plan learning activities to meet the identified needs of students, assist with the implementation of these activities, and provide access to a range of resources. The Specialist Teachers work collaboratively with teachers on continuous professional development and bring useful knowledge to the core teaching tasks of planning and teaching in a way that breaks through teacher isolation and encourages teachers to be reflective about their own practice (Meiers, et.al, 2006; Ingvarson, 2005).

### Teacher Induction

Many countries offer professional development programs specifically for new teachers, and induction programs are mandatory in many countries, including Australia, France, Greece, Israel, Italy, Japan, Korea,

New Zealand, and Switzerland. A three year study of five nations selected because they provide comprehensive induction programs (Switzerland, China, New Zealand, Japan, and France) highlighted three common features of their approaches:

1. Induction is highly structured, with clear roles for administrators, staff developers, mentors, and others responsible for the development of new teachers.
2. Induction is focused on professional growth and structured learning that are viewed as the entry into a lifelong professional growth process.
3. Community and collaboration are central to the induction process, using observation, demonstration, discussion, and friendly critique as ways of ensuring that teachers share the language, tools, and practices. (Wong, Britton, & Ganser, 2005, cited in NCTAF, 2005, p.16)

This emphasis on community and collaboration is noteworthy, in light of our review of the research on professional learning communities and their potential for supporting more powerful, job-embedded professional learning. In China, for example, both new and experienced teachers participate in extensive peer observation, public lessons with debriefs, “report lessons” or “talk lessons,” and lesson preparation and teaching research groups. In France, beginning teachers participate in teacher institutes at the local university and are inducted into a community of same-subject teachers who share common tools, language, practice, and experiences. In Switzerland, beginning teachers work in

practice groups of about six teachers from across different schools and together, they participate in peer observation, observation of more experienced colleagues, and self/peer evaluation within the practice group (NCTAF, 2005).

In a model like that found in a number of Asian nations, the New Zealand Ministry of Education funds 20% release time for new teachers and 10% release time for second-year teachers, and requires schools to have a locally developed program to develop new teachers' abilities (Britton, 2006). Most of the release time is used to give the new teachers time to attend professional development activities or extra time to perform teacher duties like writing lesson plans. Some time is also used to support mentor teachers in observing and meeting with beginners. Induction programs support new teachers' observations of other teachers (both in their own school and at other schools), class visits followed by informal discussion or written reports, working in a classroom with a mentor teacher, attending meetings for beginning teachers, and attending courses (Clement, 2000).

Mentor teachers and coaches play a key part in launching new teachers into the profession, and some countries (including Israel, Switzerland, France, Norway and England) require formal training for mentor teachers (OECD, 2005). In Singapore, master teachers are appointed to lead the coaching and development of the teachers in each school (Barber & Mourshed, 2007). Norwegian principals assign an experienced, highly qualified mentor to each new teacher and the teacher education institution then trains the mentor and takes part in in-school guidance (OECD, 2005). In some Swiss states the new teachers in each district meet in reflective practice groups

twice a month with an experienced teacher who is trained to facilitate their discussions of common problems for new teachers (Stansbury & Zimmerman, 2000). England trains new teacher coaches about both effective pedagogies for students and the National Literacy and Numeracy Strategies techniques (Barber & Mourshed, 2007).

### **Teacher Involvement in Decision-Making**

One of the policy conditions associated with increased teacher collaboration in many high-achieving nations is the decentralization of much curriculum and assessment work, often guided by national or state standards. For example, in nations such as Finland and Sweden, highly detailed curriculum documents and external tests were replaced in the 1970s and '80s by much broader goal statements that were designed to guide teachers' development of curriculum and instruction. Teachers in these and many other nations are responsible for designing key assessments to evaluate student learning as part of an assessment system that includes school-based assessments. In place of professional development seminars/workshops with topics dictated by national boards of education, the content of professional learning is determined according to local needs and is often embedded in the work of "teacher teams" or "teacher units" at particular schools, which are empowered to make decisions around curriculum and evaluation (Ahlstrand, 1994).

A study of school leadership in Finland (see box, p. 27) found the inclusion of teachers and other staff in policy and decision-making to be the norm, with teacher and administrator teams work together on developing syllabi, selecting textbooks, developing curriculum and assessments, deciding on course offerings and budget, planning

## Finland's Decentralized Model for Teacher Professional Development

During the 1990s, the Finnish educational system underwent a series of reforms that led to a decentralization of authority and granted local municipalities, schools, and teachers a high level of autonomy. Other than the college entrance exam taken at the end of general upper secondary school, there are no external high-stakes tests. Evaluation of student outcomes is the responsibility of each Finnish teacher and school (Sahlberg, 2007). The national curriculum became more flexible, decentralized, and less detailed, granting teachers a high level of pedagogical and curricular autonomy. Findings from the PISA (Programme for International Student Assessment) teacher surveys indicate that teachers are provided with substantial authority to make decisions regarding school policy and management. For example, Finnish teachers have exclusive responsibility for selecting textbooks, and have more input into the development of course content, student assessment policies, the course offerings within a school, and budget allocation within a school (Väljjarvi et al, 2007). Survey studies also indicate that nearly half of teachers' time in Finland consists of non-teaching activities such as school-based curriculum work, collective planning, cooperation with parents, and outdoor activities (Gonnie van Amelsvoort and Scheerens, 1996).

In Finland, there is no formal in-service teacher education program at the national level, other than a few days of annual mandatory training (Kansanen, 2003). In the place of compulsory, traditional in-service training are school-based or municipality-based programs and professional development opportunities that are ongoing and long-term. The focus of these programs is to increase teacher professionalism and to improve their abilities to solve problems within their school contexts by applying evidence-based solutions, and evaluating the impact of their procedures (Sahlberg, 2007). Time for joint planning and curriculum development is built into teachers' work week, with one afternoon each work designated for this work. Because the national curriculum defines outcome goals broadly, teachers within schools must work together to develop the curriculum and to plan the instructional strategies for teaching the curriculum to the specific students in their schools (Barber and Mourshed, 2007).

A study of school leadership in Finland (Hargreaves, Halász, and Pont, 2007) found distributed leadership (the inclusion of teachers and other staff in policy and decision-making) to be the norm, and a strong organizational culture of trust, cooperation, and responsibility among school staff. Teacher and administrator teams work together on developing syllabi, planning and scheduling, professional development, subject organizations, school festivals, and more.

and scheduling professional development, and more (Hargreaves, Halász, and Pont, 2007; Välijärvi et al, 2007). These deliberations are themselves a form of professional development, as teachers study issues and share their ideas.

Similarly, in Sweden, the decentralization of the curriculum and in-service training led to a shift in the focus of the development work at each school from predetermined solutions and prescribed teaching methods from the central education ministry to problems in teachers' own classrooms. Teachers were then seen not only as the consumers of professional development, but also the producers of knowledge. This has led to a new school culture as a learning organization wherein teachers' development and knowledge has become the center of school development (Ronnerman, 1996). Teachers are now required to participate in "work units" or "teacher teams," which meet during regular working hours to discuss and make decisions on common matters in their work, including the planning of lessons, the welfare of pupils, curriculum development and evaluation (Alhstrand, 1994).

Professional development policies and practices in high-achieving nations

reflect many of the principles of effective professional learning outlined by research, providing sustained and extensive opportunities to develop practice that go well beyond the traditional "one-shot" workshop approaches that are more commonly found in the U.S. Building time into teachers' work schedules provides them with regular and ongoing opportunities to engage in

collaborative inquiry aimed at improving teaching and learning in their unique contexts. Policies that provide schools and teachers with the power to make decisions around local curriculum and assessment practices, and to select the content of professional development based on local priorities, are also associated with higher levels of teacher engagement in collaborative work and learning activities.

Heavy investment in professional development is evident not only in nations that fund major professional development initiatives and national training programs but also in those nations that provide release time for teachers or reduce the number of their teaching hours to provide more time for professional development. It is apparent that in these high achieving nations, teachers' professional learning is a high priority and that teachers are treated as professionals. In Finland, the highest scoring OECD nation on all three PISA assessments in 2006, scholars attribute the academic suc-

Professional development policies and practices in high-achieving nations reflect many of the principles of effective professional learning outlined by research, providing sustained and extensive opportunities to develop practice that go well beyond the traditional "one-shot" workshop approaches that are more commonly found in the U.S.

cess of their students in part to an emphasis on teachers' professional learning and the high status of teachers as professionals:

Continuous upgrading of teachers' pedagogical professionalism has become a right rather than an obligation. This shift in teachers' learning conditions and styles often reflects ways that classroom learning is arranged for pupils. As a consequence of strengthened professionalism in schools, it has become understood that teachers and schools are responsible for their own work and also solve most problems rather than shift them elsewhere. Today the Finnish teaching profession is on a par with other professional work-

ers; teachers can diagnose problems in their classrooms and schools, apply evidence-based and often alternative solutions to them and evaluate and analyze the impact of implemented procedures. Parents trust teachers as professionals who know what is best for their children (Sahlberg, 2007, p.155).

Like Finland, many of the countries that have established strong infrastructures for high-quality teaching have built them over the last two decades. This suggests that such conditions could be developed in the United States as well, with purposeful effort and clarity about what matters and what works to support professional learning and practice.

# The Status of Professional Learning Opportunities in the U.S.

To assess the current status of professional learning opportunities in U.S. schools, as well as trends over time, we examined teacher and school questionnaire data from the federal Schools and Staffing Surveys from 1999-2000 and 2003-04 (National Center for Education Statistics). This data set is the most recent nationally representative, large scale survey on teachers' professional development that is available.<sup>1</sup>

We analyzed the data in terms of professional learning opportunities reported by teachers at the national and state levels and by school types (e.g. grade levels, type of community, and student population served.) We examined:

1. Formal professional development activities (e.g., university courses; workshops, conferences, training sessions offered during or outside of school hours); and the content of those training activities (e.g., content of the subjects they teach, using computers for instruction, teaching special education students); as well as hours spent in these activities, their usefulness ratings of those activities; and resources supporting teacher participation in professional development (e.g., release time, time built into regular work hours for professional development, reimbursement for tuition, fees, travel expenses);
2. Job-embedded professional development activities (e.g., teacher collaboration on issues of instruction, collective research on topics of professional interest, peer observation and mentoring) as well as the conditions that support teacher collaboration and learning (e.g., regularly scheduled time during teachers' work hours, level of influence teachers have over school decisions, school climate with regard to teacher cooperation); and
3. Induction programs for beginning teachers (including specific forms of induction supports received such as mentorship, seminars, reduced teaching load) in the first year of teaching.

## FORMAL PROFESSIONAL DEVELOPMENT

### Participation

Nationally, in 2003-04, almost all U.S. teachers reported participating in workshops, conferences, or other training sessions (92%) over the previous 12 months, a slight decline from the levels of participation in 1999-2000 (95%). Fewer teachers participated in other forms of formal professional development, including university courses related to teaching (36%) and observational visits to other schools (22%). About one quarter (25%) of teachers had served as a presenter in a workshop, conference, or training session. Among these

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<sup>1</sup> The 2007-08 survey was being administered at the time this report was being compiled but the data will not be available for another year or more.

types of professional development, there was a sharp drop from 2000 to 2004 in the proportion of teachers who had the oppor-

tunity to observe classes in other schools — from 34% to 22%, while other forms of learning remained relatively stable.

**TABLE 2 — PARTICIPATION IN FORMAL PROFESSIONAL DEVELOPMENT**

(Percent of teachers reporting participation in formal professional development activities during the last 12 months, 1999-2000 and 2003-04)

Types of formal professional development activities	Percentage of teachers 1999-2000	Percentage of teachers 2003-04
1) University courses for recertification or advanced certification <sup>a</sup>	31.6	
University courses in the main assignment field <sup>a</sup>	23.4	
University courses related to teaching <sup>b</sup>		35.5
2) Observational visits to other schools	34.4	22.4
3) Workshops, conferences, or training sessions (not a presenter)	94.8	91.5
4) Presenter at workshops, conferences, or training sessions	22.3	25.1

<sup>a</sup>These questions were asked in the 1999-2000 SASS Teacher Questionnaire but not in the 2003-04 version.

<sup>b</sup>This question was asked in the 2003-04 SASS Teacher Questionnaire but not in the 1999-2000 version.

There is wide variation in the types of professional learning opportunities teachers experience across states. Aside from workshops and conferences, in which nearly all teachers participate, the percentage of teachers who took university courses related to teaching ranged from 15% in Texas to 79% in

Idaho. The percentage of teachers who were presenters at workshops or training sessions ranged from 18% in Iowa to 37% in the District of Columbia, and the percentage of teachers who participated in observational visits to other schools ranged from 14% in West Virginia to 39% in Utah.

Among those who had participated in some form of professional development, teachers were asked to report on whether the content of the professional development activities included four topics (the content of the subject(s) they teach, uses of computers for instruction, reading instruction, and

student discipline and management in the classroom). They were also asked to report the number of hours that they participated in professional development on these topics in the past 12 months and to rate the usefulness of these training sessions on these topics.

**TABLE 3 — PARTICIPATION IN TRADITIONAL PROFESSIONAL DEVELOPMENT ON FOUR TOPICS**

(Percentage of teachers reporting participation in professional development during the past 12 months)

Topic of Professional Development	Percentage of teachers 2003-04	Percentage with >16 hours on topic 2003-04	Percentage who rated training on this topic "useful" or "very useful"
1) The content of the subject(s) they teach	83.4	43.3	59.3
2) Uses of computers for instruction	64.9	13.4	42.7
3) Reading instruction	60.0	19	42.5
4) Student discipline and management in the classroom	43.5	5	27.4

It appears that the improvement of teachers' expertise in how to teach specific content was a major emphasis of professional development. Nationally, 83.4% of teachers were engaged in learning opportunities focused on the content they teach, ranging from 75% in Wisconsin to 94% in New Hampshire. However, this learning was not intensive. Most teachers (57%) received fewer than two days (16 hours) of professional development during the previous 12 months. Only 23% of teachers reported that they had received 33 hours or more (more than 4 days) of professional develop-

ment on the content of the subject(s) they teach, a slight increase from 18% four years earlier.

The amount of time spent on professional learning was even smaller for other topics. For example, while 60% of teachers received some professional development on reading instruction, and slightly more (64%) on using computers for instruction, the vast majority of these teachers (80%) worked on these issues for two days or less. Across states, participation in professional development regarding reading instruction



ranged from 43% in North Dakota to 76% in Maryland. Whereas nationwide, elementary school teachers were much more likely to participate in such opportunities than secondary teachers (70% vs. 40%), in some states such as Maryland, nearly all teachers are engaged in learning to teach students to read.

There was even more variability in access to learning regarding **technology use** in the classroom. The percentage of teachers participating in professional development on the use of computers in instruction ranged from a low of 40% in Hawaii to 93% in Arizona. However, even in Arizona, only 18% of teachers had as much as two days of professional development in this area.

There are other indications that professional development for technology use is inadequate. A 2006 National Education Association survey of nearly 2,000 classroom teachers and teaching assistants found that, although 60% of teachers reported that their districts required technology training, and most felt competent in using technology for administrative or communications purposes, only about half felt their training for using technology directly with students was adequate. These findings were reflected in teachers' reports of how they actually used technology in their classrooms. While 76% of teachers reported using technology for administrative purposes on a daily basis, fewer than half of teachers used technology daily to monitor student progress (41%), for research and information (37%), to instruct students (32%), and to plan and prepare instruction (29%). In addition, teachers in urban schools were less likely than those in suburban and rural/small town schools to use computers on a daily basis for administrative and instructional tasks. The low rates of technology

use for instructional purposes are cause for some concern because of the growing importance of students' ability to use technology to access information in preparation for their work in a global society (NEA, 2008).

Teachers were also asked to report whether they had participated in at least 8 hours of training during the last 3 years on teaching special education students and limited English proficiency students. While 8 hours represents a modest level of attention to these issues, more than two thirds of teachers nationally had not had any training on supporting the learning of special education or LEP students during the previous three years. Participation rates on these two types of professional development varied widely across states, and for training on teaching LEP students, appears to be somewhat related to the school-age populations in these states. States with high percentages of English learners had more teachers involved in such professional development (64% in California, 52% in Florida, 52% in Arizona, 42% in New York, and 43% in Texas), while rates of participation were low in states like New Hampshire and Ohio (8% each).

Teacher participation in **professional development on special education** ranged widely from 21% in Idaho (where 11% of the student population received special education services in 2003-04) to 62% in Texas (where 12% of the student population received special education services in 2004). On an item that asked teachers to indicate their agreement level with the statement "I am given the support that I need to teach students with special needs," only 36% of all teachers across the states agreed with this statement. In addition, on the question that asked

teachers to select the top three topics for further personal professional growth, professional development on teaching students with special needs was the third most frequently selected topic (15% of teachers) as the number one priority for additional professional development. Overall, these findings indicate that nationally, teachers feel there is a greater need for professional development on teaching special education students. This request was followed closely by a desire for more opportunity to learn about the use of technology. (See Figure 1.)

### **Adequacy of Professional Learning Opportunities**

These data indicate that the intensity and duration of professional development offered to U.S. teachers is not at the level research suggests is necessary to have noticeable impacts on instruction and student learning. While many teachers get a day or two of professional development on various topics, very few have the chance to study any aspect of teaching for more than two days. This means most of their professional learning opportunities do not meet the threshold needed for strong effects on practice or student learning. As we noted earlier, Yoon and colleagues (2007) found in their review of research that professional development of 14 hours or less showed no effects on student learning, while longer duration programs — averaging 49 hours of engagement around a specific topic or teaching strategy — showed positive and significant effects on student achievement.

Perhaps because of the short duration, or perhaps because of other aspects of quality, most teachers were not enormously enthusiastic about

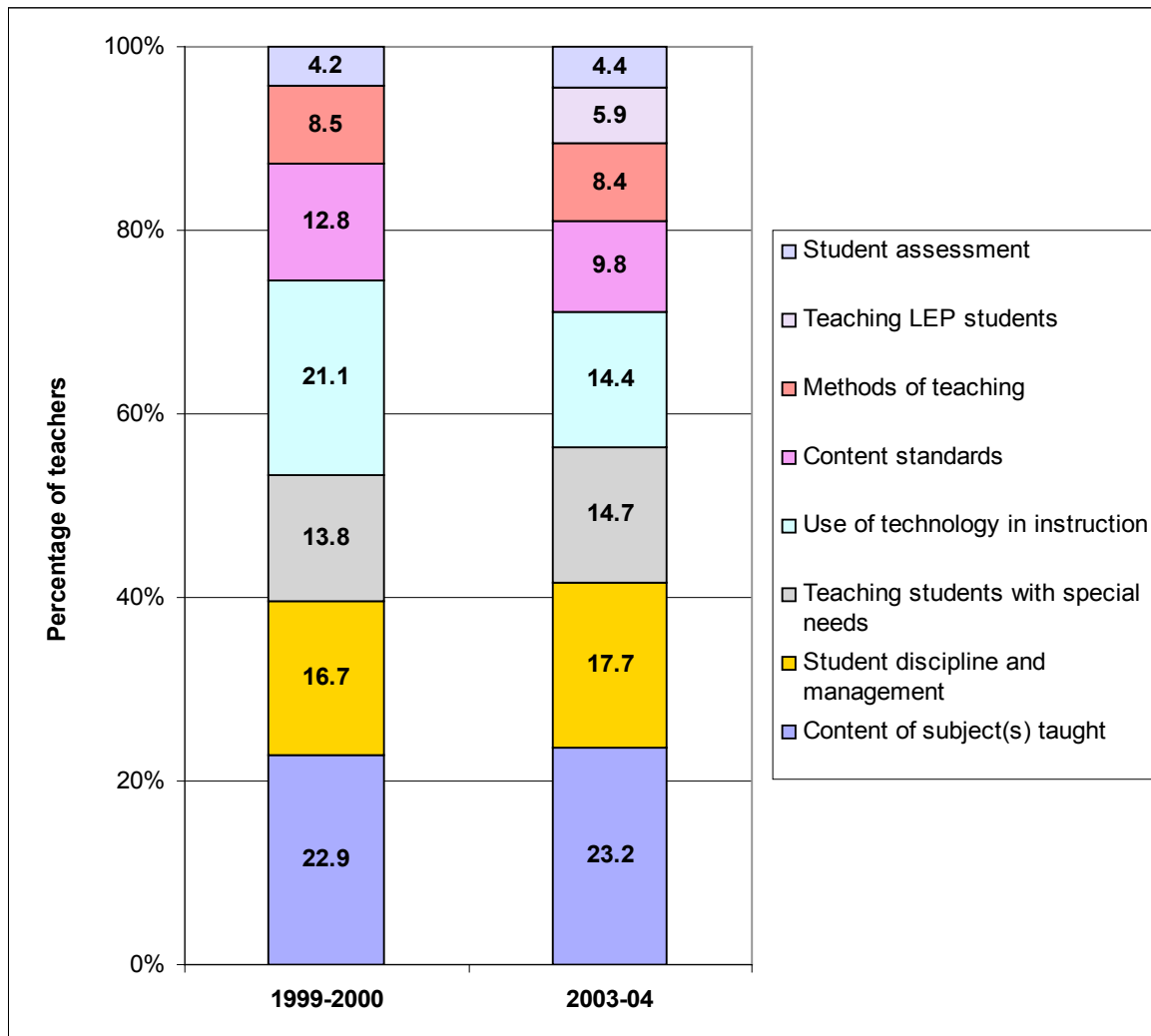
the usefulness of the professional development they received. Only 59% found content-related learning opportunities useful or very useful, and fewer than half found the professional development they received in other areas useful, including areas where they would like more opportunities to learn. There was very little variation in these ratings of usefulness across states and school contexts, with a few exceptions. Teachers in the District of Columbia, Louisiana, and Utah rated their professional development experiences higher than the national average on at least three out of the four topics. (See Table 7 in Appendix B for state data.)

Teachers in elementary schools rated their content-focused professional development significantly more highly than teachers in secondary schools. Similarly, teachers in schools with the highest LEP enrollment gave significantly higher ratings to their professional development on content than teachers in schools with lower LEP enrollment. Ratings of professional development on reading instruction were highest for teachers in elementary schools, in schools with the highest enrollments of students were minority, low-income, or limited English proficient.

On a survey item in the 2003-04 SASS Teacher Questionnaire in which teachers were asked to indicate their top priorities for further professional development, content related professional development was listed most commonly (23% of teachers) as the top priority, followed by classroom management (18%), teaching students with special needs (15%), and using technology in the classroom (14%).

## FIGURE 1. TEACHERS' TOP PRIORITIES FOR ADDITIONAL PROFESSIONAL DEVELOPMENT

(Percentage distribution of teachers by their top priority for additional professional development, 1999-2000 and 2003-04)



Note: “Teaching LEP students” was not an option in the 1999-2000 SASS Teacher Questionnaire

While we saw that many teachers had some opportunity to study content in the area(s) they teach — the number one area for more professional development — few had participated in professional development regarding classroom management — the second most commonly cited top priority for more learning. This suggests that lower

participation rates may not be a result of teachers’ lack of interest, but perhaps a lack of opportunity in this area. Participation rates ranged from 29% in Maine to 57% in Oklahoma. Furthermore, only 27% of all surveyed teachers rated the professional development they received in this area as “useful” or “very useful.” Taken together,

these results suggest that high-quality professional development on this topic may not be readily available to teachers.

### **Supports for Professional Development**

In our review of professional development policies and practices abroad, we found that a common support for professional development in high-achieving nations was the provision of time in teachers' regular work hours to engage in professional learning. In many of those nations, the time that teachers spend engaged in classroom instruction is a much smaller percentage of their working hours than that found in the U.S. (The absolute number of hours spent in classroom instruction is also significantly less in OECD nations than in the U.S.) Due to policies that build in time for professional development and collaborative work in the regular hours of teachers, teachers in those countries are able to engage in professional learning activities that are intensive and sustained over time. In addition, many of those nations have made significant investments in professional development, in many cases underwriting or subsidizing the cost of programs or tuition.

In the 2003-04 SASS Teacher Questionnaire, teachers were asked to report whether they were provided with several school supports for participating in professional development, including release time, scheduled time in the contract year, a stipend when engaging in professional development work outside of work hours, full or partial reimbursement of tuition for college courses, reimbursement for conference or workshop fees, and reimbursement for travel and/or daily expenses. Table 4 below displays the national averages for teachers' responses on these items for both 2003-04 and 1999-2000. More than three-

quarters of the respondents reported having scheduled time in the contract year for professional development. However, it is unclear from this question what the duration or frequency of that scheduled time is. As we have seen, very few teachers have the opportunity to engage in more than two days of professional development on any single aspect of their teaching, and few report more than two different kinds of professional development in a year. Thus, it does not appear that scheduled time in the contract year for professional development is of long duration. A little over half of teachers across states reported having release time to participate in professional development, and about 40% were reimbursed for workshop or conference fees. Less commonly reported supports were stipends, reimbursement of college tuition, and reimbursement for travel or other expenses related to professional development.

In comparing the results for 2003-04 with the prior SASS dataset (1999-2000), we find very slight changes in school supports for professional development activities reported by teachers. There was a slight increase in the% of teachers who reported scheduled time in the contract year for professional development and slight decreases in the% of teachers reporting reimbursement for conference or workshop fees and for travel or expenses related to participation in professional development.

States varied widely in the types of school supports provided to teachers. Some states were more likely to provide release time than others (e.g., 70% in Indiana and Wyoming) or scheduled time in the contract year (e.g., 93% in Connecticut, 91% in Arkansas). Other states focused on providing stipends for professional development outside of regular work hours (64% in

**TABLE 4 — SCHOOL SUPPORTS FOR PROFESSIONAL DEVELOPMENT**  
 (Percentage of public school teachers reporting that they had received various types of support for professional development over the past 12 months)

Type of School Support	1999-2000 percentage	2003-04 percentage
1) Release time from teaching (i.e., your regular teaching responsibilities were temporarily assigned to someone else)	54.3	54.0
2) Scheduled time in the contract year for professional development	73.6	77.9
3) Stipend for professional development activities that took place outside regular work hours	41.6	38.3
4) Full or partial reimbursement of college tuition	14.4	14.4
5) Reimbursement for conference or workshop fees	48.5	40.5
6) Reimbursement for travel and/or daily expenses	34.1	28.3

Kentucky and 62% in North Carolina), while others focused on providing reimbursements for college tuition (63% in Utah, 47% in Louisiana), for conference or workshop fees (77% in Utah, 68% in Nevada), or for travel/daily expenses (62% in Wyoming, 58% in Arkansas). Some states had higher than average percentages of teachers reporting these supports across at least four of the six supports, including Arkansas, Indiana, Maine, Missouri, New Hampshire, North Dakota, South Dakota, Vermont, and Wyoming. (See Table 3 in Appendix B for state data.)

Some states stand out in terms of providing opportunities for formal professional development. Because no states were con-

sistently outstanding across all formal professional development items, we looked at the levels of participation in workshops, conferences, or other training sessions (the most common types of formal professional development across states), and the reported levels of support provided by schools to participate in professional development (e.g., scheduled time in the contract year, release time, and reimbursement for expenses). Among the states that excelled in these areas were Arkansas, Connecticut, New Hampshire, Vermont, and Wyoming, where significantly higher proportions of teachers than the national average participated in professional development activities and reported various supports for their participation. In Arkansas, 96% of teachers

reported participating in workshops, conferences, or other training sessions, with an average of 6.6 events per teacher (as compared to 2.3 nationally), and 91% reported having scheduled time in the contract year for professional development. Sixty-three% reported having release time for professional development as well. Similarly, 95% of Connecticut teachers participated in formal professional development activities such as workshops, conferences, and training sessions, with an average of 5.6 events per teacher during the last 12 months, and 93% also reported having scheduled time in the contract year for professional development. (See boxes, following pages.)

We offer these examples as illustrative of state strategies associated with high levels of teacher participation in certain forms of professional development, but not definitive of best practices. Later phases of this study will provide a deeper analysis of professional development state-by-state and will examine more deeply the policies and practices in those states in which effective professional development exists.

### **Formal Professional Development and Supports across School Contexts**

A lower percentage of secondary school teachers reported participating in most formal professional development activities than did elementary school teachers. Secondary school teachers who participated in formal professional development events on various topics also rated these sessions less useful than did elementary school teachers and a smaller percentage of secondary school teachers reported that they had certain school supports for participating in professional development, including release time, scheduled time in the contract year, and a stipend when the professional development takes place outside regular work

hours. On the other hand, a significantly higher percentage of secondary school teachers reported receiving reimbursement for conference or workshop fees and for travel or daily expenses than did elementary school teachers. These results suggest that it was more common for elementary teachers to participate in in-service professional development that is job-embedded and a regular part of teachers' work responsibilities than secondary teachers, who were more likely to go off site for their professional learning. (See Tables 15-17 in Appendix B for comparisons across school levels.)

Interestingly, teachers in many of the highest-need schools receive the most professional development in most areas, except the use of computers for instruction. Teachers in schools with the greatest proportions of minority, low-income, and limited English proficient students had significantly higher rates of participation in formal professional development activities (such as university courses related to teaching, observational visits to other schools, workshops, conferences, or other training sessions). This was true in many areas, including the content of the subject(s) they teach, reading instruction, student discipline and classroom management, and teaching LEP students, though a smaller percentage received professional development on the use of computers for instruction than did teachers in suburban schools. This last finding was consistent with the NEA (2008) survey cited above. (See Tables 18-29 in Appendix B for comparisons across schools in different locales and across schools with varying levels of minority, low-income, and LEP student enrollments.)

While teachers in urban schools seem to have higher overall participation rates in formal professional development, a smaller

percentage report receiving school supports for this development, such as release time, or reimbursements for tuition, conference fees, and travel. Still, teachers in schools with the highest levels of minority enrollment were most likely to report school supports for professional development, such as release time or stipends when the professional development takes place outside regular school time. However, the highest percentage of teachers reporting scheduled time in the contract year for professional development — 81% - was found in schools with the lowest minority enrollments). (See Tables 20, 23, 26, and 29 in Appendix B for comparisons in reported supports across school contexts.)

These findings are somewhat surprising, given that schools in urban areas, with the highest levels of ethnic and linguistic minorities, as well as the highest levels of poverty, typically have fewer resources than schools in wealthier schools in suburbs with less diverse student populations. However, in 2003, the first year of No Child Left Behind, the amount of federal funding available for professional development in high-need schools was increased, so states and districts made greater investments in schools with lower achievement to boost scores.

## **JOB-EMBEDDED PROFESSIONAL LEARNING**

As noted in the review of the research, there is increasing consensus that the most effective forms of professional development are those that are directly related to teachers' instructional practice, intensive and sustained, integrated with school-reform efforts, and that actively engage teachers in collaborative professional communities.

Teachers in many high-achieving nations have these kinds of opportunities on a regular basis, as considerable time is built into their work week for collegial planning and learning, lesson study, and peer observations.

While we don't have fine-grained national data on these practices, the SASS Teacher Questionnaires asked teachers whether in the last 12 months they have engaged in individual or collaborative research on a topic of professional interest, participated in regularly scheduled collaboration with other teachers on issues of instruction (excluding administrative meetings), participated in peer observations, or participated in a mentor/coaching program either as a mentor/coach or as a recipient of mentoring/coaching. The national average percentages for these items are displayed in Table 5 (see page 40).

In 2003-04, about 70% of teachers reported participating in "regularly scheduled collaboration with other teachers on issues of instruction," a slight decline from the 74% in 1999-2000. Unfortunately, the survey does not specify what "regularly scheduled" means in terms of frequency, or duration, so we do not know whether teachers may be meeting for a couple of hours a month or for 10 hours a week as those in other nations frequently do. There was also a drop in the proportion of teachers engaged in individual or collaborative research, from 47% to about 40% over this time period. More, however, were involved in mentoring and coaching (46%), or peer observations (63%).

Our review of professional development practices in high achieving nations in Europe and Asia indicated that in many of these nations, time was built into teach-

**TABLE 5 — PARTICIPATION IN JOB-EMBEDDED PROFESSIONAL DEVELOPMENT**  
 (Percentage of teachers reporting participation in job-embedded professional learning, 2003-04)

Types of collaboration	Percentage of teachers 1999-2000	Percentage of teachers 2003-2004
1) Individual or collaborative research on a topic of professional interest	46.7	39.8
2) Regularly scheduled collaboration with other teachers on issues of instruction (excluding administrative meetings)	74.4	70.4
3) Peer observation	42.1 <sup>a</sup>	63.0
4) Mentoring / coaching		45.7

<sup>a</sup>This was a single item in the 1999-2000 SASS Teacher Questionnaire: “Mentoring and/or peer observation and coaching.”

ers’ contracted working hours for teacher collaboration and other professional development activities, and that the time spent in classroom instruction was a relatively smaller percentage of teachers’ working time. For example, in South Korea, only about 35% of teachers’ working hours are spent in classroom teaching, which allows for sustained engagement in collaborative professional learning activities. In the U.S., by contrast, teachers reported on the SASS that they spend about 76% of their contracted weekly working hours in classroom instruction (28.6 out of 37.7 contracted hours, on average). This is slightly less than the 79% reported in an OECD report (2007). Of this 24%, or 9 hours per week, other data suggest that about 3 to 5 hours is typically spent in independent planning, and some amount is spent in duties like lunchroom or hall duty, leaving very little for collaboration to improve curriculum and instruction.

Indeed, other responses suggest that the intensity of teacher collaboration is minimal in most U.S. schools. In another series of questions related to “Teacher attitudes and school climate,” teachers were asked to indicate their agreement level on a 4 point scale (1=Strongly agree to 4=Strongly disagree) on a variety of statements, including: “There is a great deal of cooperative effort among the staff members” and “I make a conscious effort to coordinate the content of my courses with that of other teachers.” Nationally, only 17% of teachers agreed that there was a great deal of cooperative effort among staff members, and only 14% agreed that they made conscious efforts to coordinate the content of courses. These responses suggest that whatever collaboration occurs among U.S. teachers, it is not spent in common curriculum planning of curriculum or in the kind of “joint work” we described earlier.



## Professional Development Policy and Practice in Connecticut

Connecticut's teacher quality initiatives and their role in improving classroom practice have been well documented in several studies (e.g., Baron, 1999; Darling-Hammond, 1999; Wilson, Darling-Hammond, and Berry, 2001; Berry, Hopkins-Thompson, and Hoke, 2002). Following significant investments in teacher quality in the late 1980s, Connecticut has posted significant achievement gains, becoming one of the top scoring states in the nation in mathematics and reading by the end of the 1990s, despite an increase in the proportion of low-income and limited English proficient students during that time.

In 1986, the state's Educational Enhancement Act appropriated \$300 million to increase minimum beginning teacher salaries and to equalize salaries across districts. It also included provisions that created a staged teacher licensing process that included a beginning teacher induction program (the BEST — Beginning Educator Support and Training — program) and trained mentors for all new teachers and student teachers; required ongoing professional development, including a masters degree for a professional license and continuing education for license renewal (currently 90 hours or 9 Continuing Education Units every five years). The law required districts to develop professional development plans, career incentive plans, and teacher evaluation systems, which were partially funded by the state (Darling-Hammond, 1999). Districts were required to provide state-approved course opportunities every year, free of charge for all teachers. These opportunities for professional development offered by districts and the 90 hour requirement for all teachers partially explain the high levels of teacher participation in formal professional development evidence in the SASS data (B. Sternberg, personal communication, November 4, 2008). Currently, elementary teachers are required to complete 15 hours of training in reading instruction and all K-12 teachers are required to take 15 hours of training in the use of computers in the classroom.

The National Education Goals Panel (1998) identified the state's intensive professional development program in mathematics, science and technology as a critical factor in Connecticut's strong performance and large student achievement gains in mathematics and its teacher investments in reading as a critical factor in the strong performance in reading (Baron, 1999). Since 1983, Connecticut has offered 4-week institutes in math, science, and technology with follow-up support to elementary, middle, and high school teachers. Investments in Reading Recovery training and other supports for literacy development have been credited with the strong reading gains that also occurred. In 1995, the state also invested in new curriculum frameworks and a statewide student testing system using performance assessments intended to measure higher order thinking and performance skills. This system is tied to statewide reporting of scores and substantial new professional development, which has served to improve curriculum and teacher development (Darling-Hammond, 1999).

In recent years, spurred by the school improvement provisions of the No Child Left Behind Act, Connecticut engaged in a state-wide effort to train school teams to engage in "Data-Driven Decision Making" (School Improvement Network). Using federal funds, they contracted with Doug Reeves of the School Improvement Network to provide direct trainings of several hundred participants at a time, members of school teams, and a training of trainers model was used to expand the scope of this model to local schools across the state (B. Sternberg, personal communication, November 4, 2008).

## Formal Professional Development Initiatives in Arkansas

Arkansas has been strengthening its professional development supports for many years. In 2003, the state required teachers to complete 30 hours of professional development annually for licensure renewal. In 2005, the State Board of Education increased the number of annually required hours of professional development to 60 for all certified staff and aligned the state's professional development programs with NSDC's standards for professional development. Of the 60 required hours, at least 6 hours are to include training in technology and at least 2 hours are to focus on Family Involvement. Twelve hours can be met through time spent at the beginning of the school year engaged in a wide range of professional activities, including curriculum planning, grade level or vertical team planning, and team work to analyze student data. The state provides direct professional development services and allows categorical funding (based on the poverty index) to be used for professional development targeted at improving student achievement. A number of notable statewide professional development initiatives provide the kind of extended, collegial learning opportunities identified by research as needed for changing practice and outcomes. Among these are:

The Arkansas Leadership Academy, established in 1991 to provide training programs and leadership skill development opportunities for teachers, administrators and other school leaders, established the Teacher Institute in 1997. The Academy's Teacher Institutes, funded privately by the Winthrop Rockefeller Foundation and the Walton Family Foundation, involve a year-long study in which pairs of classroom teachers spend 13 days in structured, group activities, organized into 4 sessions, spread throughout the year. These sessions are designed to help teachers develop specific skills including action research, collaboration, reflective practice, professional dialogue, and developing professional learning communities, and to equip them to be teacher leaders (Arkansas Leadership Academy, 2003). The stated purpose of the Teacher Institute is "to develop Arkansas public school teacher-leaders who are continuous learners and are actively engaged in a statewide, networked learning community which supports the use of diverse teaching and learning practices that will result in high teacher performance and student achievement." By 2007, 500 teachers had completed the Teacher Institutes (Arkansas Leadership Academy, 2003-07).

In 1994, Arkansas signed on to participate as one state among 25 states in the State-wide Systemic Initiative (SSI), funded over five years by the National Science Foundation to improve math and science instruction. The goal of the Arkansas SSI was to change the system at all levels, including (a) increasing the capacity at the local level by providing professional development to large numbers of teachers and working with school and district leadership teams; (b) establishing regional partnerships to provide ongoing assistance to local districts; and (c) creating a more supportive policy context for improved mathematics and science education. The strategy that Arkansas followed

was to expand the reach of its math “Crusades” courses taught by teams of content and pedagogy experts. The Crusades courses, which usually met once a week in the evenings, were offered throughout the state. The grade K–4 Crusades course integrated mathematics, science, and (with support from state funds) language arts, to support teachers responsible for self-contained classrooms. At grades 5–12, a key focus of the course was articulation of content across the grades. One of the major features of the program was to provide teachers with classroom sets of hands-on materials. Over the five years of the Arkansas SSI, more than 8,000 teachers had participated in one of the Crusades programs, with an estimated impact on 87 percent of Arkansas students. Although some aspects of the program were scaled back when the NSF funding ran out in 1999, the initiative has had lasting impacts on the math and science professional development infrastructure (Heck et al., 2003). Mathematics specialists continue to provide support and training for more than 200 teacher leaders and coaches across the state, who in turn support teachers in local schools in their efforts to learn about and implement standards-based mathematics instruction.

Since 1999, the state has used this tiered approach to extend the reach of its adopted mathematics professional development program (“Math Solutions”) by inviting elementary teachers across the state to a five-day course, which enrolls 300-400 teachers each time it is offered. In between the courses, the state math specialists provide follow up and additional classes to help teachers put their learning to use in their daily instructional practice. Judy Trowell, Coordinator of Professional Development for Arkansas Mathematics Specialists, reported: “Since our partnership with Math Solutions began, I’ve noticed a real change in the way mathematics is taught. When I observe teachers in their classrooms, I see better ways of questioning students...real efforts to incorporate hands-on experiences in the classroom. Teachers tell me that, after taking the Math Solutions course, they encourage students to share their solutions and strategies – they place more value on that kind of sharing and learning.” (Math Solutions, 2008). A Math Solutions specialist commented, “I don’t know of any other state that has this tiered system in place. This is a different approach, and one that is working well for Arkansas. They are charting a new course for building capacity throughout the state” (Math Solutions, 2008). During the period between 2000 and 2005, 8th graders in Arkansas made among the largest gains in mathematics on the National Assessment of Education Progress, with African American students making particularly large gains (Education Trust, 2006).

The state currently funds the employment of literacy and mathematics specialists (51 in literacy, 16 in K-6 math, and 10 in secondary math as of 2001) to provide targeted training to schools and districts to implement a standards-based system focused on reading, writing, and mathematics (Arkansas Department of Education, 2001). Though participation in the program has been voluntary, all districts in the state participate in this initiative (J. Riggs, personal communication, November 6, 2008).

A few states report high levels of teacher collaboration and coaching. In California, 79% of teachers reported participating in regularly scheduled collaboration, 74% reported participating in peer observation, and 51% reported participating in a mentoring program. In Kentucky, 76% of teachers reported participating in regularly scheduled collaboration and 71% of teachers reported observing or being observed by other teachers. In Washington 78% of teachers participated in regularly scheduled collaboration and 50% engaged in individual or collaborative research on a topic of professional interest. However teachers report about the same low levels of teacher collaboration and course coordination as the national average.

that in many of the nations where teacher collaboration is a norm, teachers also have substantial influence in school-based decisions, especially in the development of curriculum and assessment. As we described earlier, and as other research has documented, teacher management of curriculum and assessment development, as well as of professional development, is common in many European and Asian nations. (See Darling-Hammond & McCloskey, in press; Laukkanen, 2008; Hargreaves, Halász, and Pont, 2007; Välijärvi et al, 2007). U.S. teachers report considerably less influence. Fewer than one-fourth of teachers feel they have great influence over school decisions and policies in seven different areas noted in the SASS surveys. (See Table 6.)

In our research on professional development in high achieving nations, we found

While 59% reported having at least moderate influence over curriculum

**TABLE 6 — TEACHER INFLUENCE ON SCHOOL DECISIONS AND POLICIES**  
(Percent of teachers reporting perceptions of their influence on school decisions and policies, 2003-04)

	National Average	None 1	Minor 2	Moderately 3	Greatly 4
1) Setting performance standards for students	2.56	16.2%	29.0%	37.1%	17.8%
2) Establishing curriculum	2.67	13.9%	27.0%	37.4%	21.7%
3) Determining professional development content	2.45	15.5%	36.3%	35.5%	12.7%
4) Evaluating teachers	1.66	52.1%	32.0%	13.3%	2.6%
5) Hiring new teachers	1.84	44.9%	31.8%	18.1%	5.3%
6) Setting discipline policy	2.39	19.2%	34.8%	33.7%	12.3%
7) Deciding how school budget is spent	1.85	40.3%	37.8%	18.1%	3.8%

## Professional Development and Teacher Collaboration in Washington State

During the 1990s, Washington invested in professional development as part of statewide standards-based reforms. New standards and curriculum frameworks, state assessments, and state professional development guidelines were all developed in tandem. In 1993 the state legislature passed the Student Learning and Improvement Act, referred to as the Education Reform Act, which implemented content standards and state assessment measures over a 10 year period. The law allocated additional funds to professional development, providing small discretionary grants to schools to create school-based restructuring plans and establishing 16 Learning and Assessment Centers in the state, operated by the governor's Commission on Student Learning (CSL), to offer training on the reform. The CSL used a training-of-trainers model and provided tool kits for teaching and learning of new standards (Stecher, Chun, Barron, & Ross, 2000; Laguardia, et al., 2002).

During the initial years of the reform, funding was provided for Student Improvement Learning Grants for teachers to use for professional development, which included the development of more effective classroom assessments. Later the program was modified to focus on literacy and mathematics. In 1999, the monetary awards were replaced by additional professional development days in teachers' contracts and districts added three days to school calendars to allow teachers to focus on improving student learning and to meet the goals of the reform. Districts, schools and teachers worked to align classroom practices with the standards in the reform (LaGuardia et al, 2002). Case studies of exemplary schools indicate that schools engaged in collaborative activities to align classroom practices with the reform. Teachers met in grade level teams, across grade levels and in district networks to address student progress and determine appropriate sequence and scope of curriculum (Stecher & Borko, 2002).

Piloted in 2002 and implemented in 2005, Washington launched a new professional development initiative which emphasizes performance assessment over "clock-hours" as evidence of professional growth for professional certification. Individual teachers, learning communities, and grade level or subject matter teams can submit professional growth plans, which much be aligned with school goals and student needs and include goals found in the research-based Washington Sate Professional Development Planning Guide. Upon approval of a district professional development committee, teachers can earn up to 60 of the required 150 clock hours of professional development credit required for several types of certification (OSPI, 2006). These initiatives have stimulated many forms of teacher collaboration focused on improving student learning.

## Kentucky's Model of Professional Development and Collaboration

As part of the 1990 Kentucky Education Reform Act, the Kentucky Department of Education (KDE) established nine regional service centers which supply resource teachers and materials to improve instruction throughout the state. The law increased funding for professional development from less than \$1 per student to \$23 per student annually over several years (McDiarmid & Cocoran, 2000). As part of a multifaceted professional development plan, schools were allotted 65% of the professional development funds, while 35% went to districts. In 1994, state law required school site councils to submit annual plans outlining the content of professional development, its alignment with the reform, and describing how all members of the school would be served by the plan. In addition, the Kentucky reform included an innovative student mathematics and writing portfolio that was implemented and evaluated by teachers. The Department created a complex trainer-of-trainer model in which each teacher in the state was trained on the implementation and scoring of the portfolios and provided with supplemental resources. Resource teachers supported 700 cluster leaders throughout the state, who in turn supported every teacher implementing the reform (Borko, Elliot, & Uchiyama, 1999).

In 1999, regulations encouraged professional development that included summer institutes and school improvement activities, including curriculum work with colleagues, study groups and teacher networks, as legitimate professional development activities (McDiarmid & Corcoran, 2000). Kentucky currently requires four days of professional development in which teachers are engaged in effective learning processes and collaborative and collegial activities. The local school based council determines the content of three of the days and the district superintendent has discretion to use one of the days for districts wide activities (KDE, 2007).

decisions, and a small majority (55%) said the same about setting performance standards for students, only 48% felt they had even moderate influence on determining the content of in-service professional development. Even smaller shares of teachers felt they influenced policies or decisions regarding teacher hiring (23%), the school budget (22%), or teacher evaluation (16%). The levels of influence that teachers reported in the 2006 Met Life Survey of the American Teacher were more optimistic. Of the

1,001 teachers surveyed, 60% rated their influence on policies that affect them as adequate, with most rating as “adequate” their influence on the training they receive (77%), the school curriculum (75%), and “team building and problem solving” (87%). In both surveys, teachers in urban schools were substantially less satisfied than teachers in non-urban schools with their influence on policies that affect them, on the training they receive, and their school curriculum (MetLife, 2006).

### Teacher Collaboration and Participation in Decision Making across School Contexts

Paralleling the findings on formal professional development, elementary teachers participated at higher rates than secondary teachers in regularly scheduled collaboration with other teachers on issues of instruction (75% vs. 63%). On the other hand, elementary teachers were less likely than secondary teachers to agree that there was a great deal of cooperative effort among staff members (15% vs. 21%) and that they make conscious efforts to coordinate course content (11% vs. 19%). Elementary and secondary teachers also varied in their perceptions of how much influence they had on school decisions, with elementary teachers reporting a greater level of influence than secondary teachers on determining the content of in-service professional development, hiring teachers, setting discipline policy, and deciding how the school budget will be spent. Secondary teachers reported a significantly greater level of influence than elementary teachers on establishing curriculum and evaluating teachers. (See Tables 30-32 in Appendix B for differences across school grade levels.)

Teachers in urban schools and in schools with high levels of minority, LEP, and low-income student enrollment had the highest rates of participation in regularly scheduled collaboration with other teachers, peer observation, coaching or mentoring. For example, while 68% of teachers in urban schools reported participating in peer observations, only 63% of teachers in suburban schools and 56% of teachers in rural schools did so. Teachers in these contexts (urban, high minority/LEP/poor student enrollment) were also more likely to agree that there was a great deal of cooperative effort among school staff and that

they coordinate course content (although the levels of agreement indicate that most teachers across contexts disagree with these statements). On the other hand, teachers in these contexts reported the lowest levels of perceived influence on school decisions and policies (including setting performance standards for students, establishing curriculum, developing the content of in-service professional development, and setting discipline policy). Teachers in small/town rural schools and schools with the lowest levels of student poverty reported significantly higher levels of influence over school decisions and policies. (See Tables 33-44 in Appendix B for comparisons across school contexts.)

### BEGINNING TEACHER INDUCTION

Induction is a form of professional development designed specifically for novice teachers. It is generally intended to help them both refine both their technical skills and their knowledge and understanding of the context within which they are teaching. Attention to the induction needs of beginning teachers is an area where there has been considerable progress made in the United States; however, as a nation, we are still far from providing the universal access to intensive mentoring, coaching, and job supports common in many other countries

In 1996, the National Commission on Teaching and America's Future found that only 8 states mandated and funded induction programs for beginning teachers (NCTAF, 1996). By 2004, the Council of Chief State School Officers (CCSSO) reported that 21 states required new teachers to participate in an induction program and 31 states provided some form of induction. Among these, 16 of the states with mandates provided state funding or subsidized

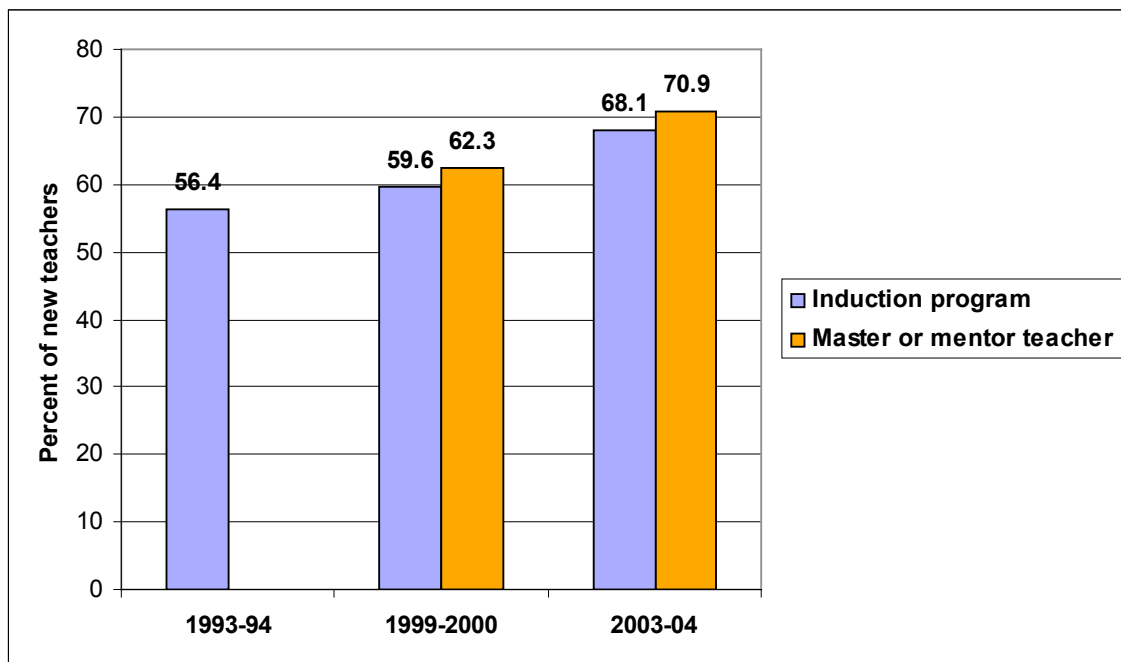
the cost (CCSSO, 2005). In another 2004 survey, Hall (2005) found that 33 states mandated new-teacher mentoring programs, with 22 of the states reporting state funding for those programs and 23 states requiring mentor training. By 2008, Education Week reported that 22 states mandated that new teachers participate in a state-funded induction program, and 25 states required new teachers to participate in a state-funded mentoring program (EdWeek, 2008). Despite expanded state support for induction programs, these figures indicate that only half of the states are currently investing in the systematic training and support of their beginning teachers.

Nationally, in 2003-04, 68% of public school teachers with fewer than 5 years of experience reported participating in a teacher induction program during the first year of teaching and 71% reported being assigned some kind of mentor teacher, a noticeable increase from a decade earlier. (See Figure 2.)

This is encouraging news in light of research that has found that participation in an induction program, with subject-specific mentorship and opportunities to participate in collective induction activities such as common planning, is associated with lower rates of attrition or movement

## FIGURE 2 - BEGINNING TEACHER PARTICIPATION IN INDUCTION AND MENTORING PROGRAMS

(Percent of new teachers who participated in a formal induction program or worked with a master or mentor teacher during the first year of teaching, 1993-94, 1999-2000, 2003-04)



*Note: The percentage for the 1993-94 SASS data is based on teachers with 3 or fewer years of experience. The percentage of those teachers who worked with a mentor or master teacher is unavailable for that year because the question was not asked in that year's survey.*



**TABLE 7 — BEGINNING TEACHER ACCESS TO INDUCTION SUPPORTS**

(Percentage of teachers with fewer than five years' experience who reported being provided with various induction supports in their first year of teaching, 2003-04)<sup>a</sup>

Type of induction support	Percentage of teachers 2003-04
1) Working with a master or mentor teacher	70.9
1a) Working with a mentor teacher in the same subject area	51.8
2) Regular supportive communication with a principal, administrator, or department chair	79.0
3) Seminars or classes for beginning teachers	67.6
4) Common planning time	49.2
5) Reduced number of preparations	8.0
6) Reduced teaching schedule	5.1

<sup>a</sup>Although listed in the SASS survey as an induction element, “extra classroom assistance (e.g., teacher aide)” did not figure in the analyses of induction supports because it is not generally considered a support specifically aimed at promoting new teacher learning and growth.

to other schools (Smith and Ingersoll, 2004). Most recently, for example, Rockoff (2008) found that New York City's new teacher mentor program (designed in collaboration with the New Teacher Center at the University of California, Santa Cruz) helped to reduce new teacher attrition and absenteeism, and that more time spent with a mentor was associated with greater gains in student achievement in mathematics and reading.

However, participating in an induction program does not always mean that new teachers receive this kind of intensive mentoring, or that they receive the supports common in other nations. In 2003-04, only about half of all beginning teachers had a mentor teacher in the same subject area and about the same number had the opportunity for common planning time — a universal ex-

pectation in many other nations. Only 29% reported receiving all four of the most common supports shown in Table 7 — a mentor, regular communication with a principal or other administrator, seminars for beginning teachers, and common planning time.

Those who did have a master or mentor teacher generally found it helpful. In 2003-04, 74% of teachers who reported having a master or mentor teacher found their master or mentor teachers to have been “moderately” or “greatly” helpful. New teachers who had a master/mentor teacher in the same subject area had significantly higher ratings of their helpfulness than those whose master/mentor teacher did not teach the same subject area (85% vs. 65% rating their master/mentor teacher's support as “moderately” or “greatly” helpful). These findings are consistent with prior

## New Teacher Induction Policy and Practice in South Carolina

New teachers in South Carolina are well-supported by a universally available induction program. First-year teachers in South Carolina are required to participate in their districts' induction and mentoring programs, developed and approved according to guidelines established by the State Board of Education. The guidelines specify responsibilities of district and school administrators, including annual evaluations of the program; describe the mentor-guided formative assessment procedures and professional development plans all beginning teachers must complete; and provide criteria for the selection, assignment, and professional development of mentors. The induction programs are part of South Carolina's Assisting, Developing, and Evaluation Professional Teacher (ADEPT) system, which began in 1998. During the induction year, beginning teachers learn about the ADEPT Performance Standards that are the basis for teacher evaluation for all teachers. The ten ADEPT Performance Standards are grouped into four broad domains: planning, instruction, classroom environment, and professionalism.

Another key part of each induction program is the mentor-guided formative assessment process, which consists of (1) collecting performance data, (2) analyzing the data in terms of the ADEPT performance standards, (3) developing the teacher's individual professional growth and development plan, and (4) implementing the plan and beginning the formative assessment cycle again. Beginning teachers must be given feedback using this formative assessment process at least twice a year and meet with their mentors at least once a month.

The South Carolina Department of Education's Division of Educator Quality and Leadership (DEQL) and the Center for Educator Recruitment, Retention, and Advancement (CERRA) conduct initial mentor training, provide or coordinate continuing professional development for all mentors, arrange for some mentors to receive advanced training, and work with each district's induction and mentoring coordinator to plan and implement an evaluation of the district's induction program. Mentors must be recommended by both a school administrator and another teacher in the district, complete a three day initial training conducted by DEQL and CERRA, and participate in at least 15 hours of professional development related to mentoring in the next five years (DEQL, 2006; SCDE, 2006).

The South Carolina General Assembly appropriates funds annually that are dispersed to school districts on a per-induction-teacher basis.. These funds may be used to provide a stipend, release time, or additional assistance in the classroom. The per-teacher allocation varies each year, based on the total number of first-year teachers in the state. For the 2007-08 school year, districts received \$590 in state funds per induction teacher and were encouraged to use a portion of their Title II professional development funds to support ongoing training for mentors.

research on the benefits of subject-specific mentoring (Hudson, 2004; Feiman-Nemser and Parker, 1990) and current practice in induction programs in high achieving nations.

The findings on participation rates in induction and mentoring programs for 2003-04 are mirrored in results from the MetLife Survey of the American Teacher (2004-2005), which was administered by the Harris polling company to a nationally representative sample of 800 teachers with fewer than five years of experience: 81% of these new teachers reported being assigned a more experienced mentor teacher, and of those reporting having had a mentor, 63% rated their mentors “very helpful” or “extremely helpful.”

Less common types of induction support were a reduced number of preparations (8%) and a reduced teaching schedule (5%). Altogether, 4.8% reported receiving at least five of the six types of induction support listed in Table 2, and only 1.6% reported receiving all six types of support. Research suggests that these supports can help beginning teachers navigate through their first years of teaching successfully, improve their teaching, and persist in the profession (Fideler & Haselkorn, 1999; Serpell & Bozeman, 1999; Arends & Rigazio-DiGilio, 2000; Smith & Ingersoll 2004; Ingersoll & Kralik, 2004). The findings from the SASS data suggest that there is still much room for improvement in the quality and intensity of the induction supports provided across the nation.

New teacher induction and support varied substantially across states, from a low of 30% (in Montana) to 96% (in South Carolina). In **South Carolina**, 85% of beginning teachers reported having a master or

mentor teacher (75% of them in the same teaching subject), and 82% reported receiving at least 3 of the 4 most common types of support listed above. Another state with strong supports was **Missouri**, where 87% of new teachers reported participating in an induction program during their first year, and 91% of those teachers also reported having had a master or mentor teacher (80% in the same teaching subject). Three-quarters (76%) reported receiving at least 3 of the 4 most common types of support listed in Table 2. More information on the induction programs and policies of Missouri and South Carolina is provided in the pages that follow.

### Variations across school contexts

Rates of participation in induction were significantly higher in suburban schools (73%) than in urban schools (64%) and small town/rural schools (63%). Rates of participation in induction were highest in schools with the least poverty (75%) and lowest in schools with high levels of poverty (65%). Rates of participation in induction were also highest in schools with very low LEP student enrollment (77%) vs. those with the highest LEP enrollment (66%). These findings indicate that suburban schools, schools in primarily affluent communities, and schools with low levels of linguistic diversity are most likely to provide new teachers with induction programs and services.

Teachers in more affluent and suburban schools were significantly more likely to have access to a master or mentor teacher than those in urban schools and those with high poverty levels. Nearly three-quarters (74%) of new teachers in suburban schools worked with a mentor, as compared to 72% in small towns and only 65% in urban schools. New teachers in schools with

## New Teacher Induction Policy and Practice in Missouri

Missouri supports new teachers much more intensively than most other states, having gradually solidified policies on teacher induction over the last decade. In 1996, the state both required and financed induction for all new teachers, although there was some softening of the funding commitment in 1997 (Johnson, 2007). Then, in 2003 Missouri passed legislation requiring beginning teachers to participate in a two year mentoring program as well as a “Beginning Teacher Assistance” (BTA) program in order to maintain an initial professional certificate (Missouri Department of Elementary and Secondary Education, 2006). At that time, the Missouri State Board of Education adopted five standards to assist schools in creating successful mentoring programs that include appropriate training, peer support, release time, and financial support for mentor teachers. These five standards include statements about 1) the scope and purpose of the mentoring program; 2) mentor incentives such as release time and stipends; 3) mentor training appropriate to the mentor role; 4) mentor selection and matching; and 5) evaluation of the effectiveness of mentoring.

By law, Missouri also requires all beginning teachers to have a professional development plan as part of their participation in the BTA program. The Professional Development Committee for each district, the members of which are selected by teachers employed by the district, is required to develop a generic plan, and individual teachers with their mentors and school principals customize the plan to individual needs. The plan may include goals in such areas as classroom management, understanding district policies, and use of curriculum guides, equipment and materials. The new teacher should continue to adjust the plan during the first four years on the job. An individual professional development plan is required throughout the time that a teacher has an Initial Professional Certificate (Missouri State Teachers Association, 2005). In addition, beginning teachers who graduated from a Missouri teacher preparation program must be provided ongoing assistance by the program, which may include retraining, internship, counseling, and in-service training.

Missouri’s Outstanding Schools Act of 1993 required that at least 1% of the state aid that districts receive (not including categorical add-ons) is allocated to the district’s Professional Development Committee to meet the objectives of the district’s Comprehensive School Improvement Plan. These funds may be used, in part, to pay mentor teacher stipends (Missouri Department of Elementary and Secondary Education, 2006).

the highest poverty levels were least likely to report working with a master or mentor teacher (68%) compared with teachers in schools with lower poverty levels (ranging from 72 to 74%). In addition, a significantly higher percentage of elementary school teachers reported working with a master or mentor teacher than secondary school teachers (73% vs. 69%). (See Tables 45-49 in Appendix B for comparisons of reported induction supports across school contexts.)

The helpfulness rating of master or mentor teachers was fairly consistent across school contexts with a few exceptions. Teachers in schools with the highest percentage of minorities rated the helpfulness of their master/mentor teachers significantly lower on

average than did teachers in schools with the lowest minority enrollment (2.55 vs. 2.96 on a 4 point scale). This may suggest that the quality of the mentorship programs in schools with high minority enrollments is not as high as in schools with low minority enrollment. We know that in many “hard to staff” schools with high minority enrollments, teacher quality is generally lower, turnover is higher, and higher percentages of novice, emergency credentialed, and underprepared teachers are employed (see e.g., Jepsen & Rivkin, 2002; Oakes, 2002; Esch et al., 2005). It can often be difficult in these schools to recruit, train, and maintain a corps of expert mentor teachers for the revolving door of new teachers in these schools.

## Another Lens on Professional Learning Opportunities: The NSDC Standards Assessment Inventory

Since the 2004-05 academic year, the National Staff Development Council (NSDC) has administered a survey called the “Standards Assessment Inventory,” an instrument with 60 survey questions designed to measure the alignment of school/district professional development practices with the NSDC’s 12 Professional Development Standards. See Appendix C for the 60 survey items on the SAI. In a recent study of the validity of the SAI, using data from the Spring 2006 administration of the survey in Georgia, researchers found that average school level ratings on the instrument were significant predictors of student achievement on a standardized English Language Arts assessment in grades 1-4 (Georgia’s Criterion-Referenced Competency Tests). The study also found that two constructs that emerged from factor analysis of the data, “Process” and “Equity,” were significant and positive predictors of student’ ELA achievement in grades 1-4 (Vaden-Kiernan, Hughes Jones, and McCann, 2008).

Data from the most current administration of the survey (2007-08 academic year) were analyzed for this report. Because the survey sample is not a nationally representative sample, we made strategic choices about which states’ samples to include in our analyses. We included survey responses from two states (Arizona and Georgia) that contracted with the NSDC to administer the survey statewide. We also included survey responses from Missouri and Alabama, which administered the survey widely on a voluntary basis. The data from these four states were combined and analyzed, and results were compared with results from the Schools and Staffing Survey (2003-04). (See Appendix A for more detail on the methodology used to analyze this dataset.)

To inform our analyses of the SAI’s 60 items, we assessed the constructs within the 2007-08 SAI dataset through factor analyses, and the results indicated that there were four factors. Analyzing the items in each factor, we found that the items were

comprised of items that reflect the following concepts:

- Factor 1 — Opportunities for Professional Development and Collaboration (20 items);
- Factor 2 — School Leadership (10 items);
- Factor 3 — Equity (9 items);
- Factor 4 — Teacher Influence and Collaboration (5 items)

The results of our analyses indicated that teachers rated their school principal’s leadership and their schools’ equity focus more highly than they rated their opportunities for teacher collaboration and their influence on school decisions and policies. Computing the composite (average) survey ratings for each factor, we found that for the entire sample (across four states), there were significant differences between the average ratings across the four factors (see Table 8, next page). These findings are consistent with those found in the SASS dataset,

in which teachers reported relatively low levels of influence on school decisions and policies and low levels of cooperative effort and course coordination with other teachers. Again, these findings suggest that the kind of job-embedded collaborative learning that has been found to be important in promoting instructional improvement and student achievement is not a common feature of professional development across many schools. In addition, teachers' lack of influence over school decisions means that teachers are less likely to be engaged in collaborative problem-solving around school-specific issues.

Differences in the mean ratings between all pairs of factors are significant at the .001 level. The sample includes respondents from four states with the largest samples: Arizona, Alabama, Georgia, and Missouri

Overall, we found high levels of agreement between our four-state SAI dataset and the findings from our SASS dataset, although

differences in the survey scales make it difficult to make direct comparisons. In the SAI dataset, we found that a high percentage of teachers reported having a wide variety of professional development activities “frequently” or “always (76%), and that professional development is an integral part of their school’s improvement plans “frequently” or “always” (89%). There was also consistency in the content of professional development, with high levels of participation in professional development that deepened teachers understanding of the content they taught (69% “frequently” or “always”), and on the use of technology to enhance instruction (71% “frequently” or “always”).

Teachers’ reports of school supports for professional development, including release time (the provision of substitutes) and time for professional development built into teachers’ regular work hours, were comparable in both datasets. In addition, about 69% reported that the teachers met

**TABLE 8 — AVERAGE TEACHER RATINGS ON THE SAI FACTORS**  
NSDC Standards Assessment Inventory (2007-08)

FACTOR	Mean	N	Std Dev.	Std Error	95% Confidence Interval for Mean	
					Lower Bound	Upper bound
1. Opportunities for Professional Development & Collaboration	2.817	51398	.757	.00334	2.8101	2.8232
2. School Leadership	3.129	51398	.783	.00346	3.1221	3.1356
3. Equity	3.216	51399	.629	.00277	3.2105	3.2214
4. Teacher Influence and Collaboration	2.629	50739	.837	.00372	2.6213	2.6358

Notes: Rating on a five point scale: 0=Never, 1=Seldom, 2=Sometimes, 3=Frequently, 4=Always

**TABLE 9 — LOWEST AND HIGHEST MEAN RATINGS ACROSS SAI ITEMS**  
 NSDC Standards Assessment Inventory — 2007-08 (Four states)

Standards Assessment Inventory Item	Mean	N	Std Dev.	Percent of teachers reporting "Frequently" + "Always"
<b>Lowest Ratings</b>				
29. We observe each other's classroom instruction as one way to improve our teaching. (OPPORTUNITIES FOR PROF. DEV'T & COLLABORATION)	2.15	50763	1.197	39.5
53. At our school, teachers can choose the types of professional development they receive (e.g. study group, action research, observations). (TEACHER INFLUENCE & COLLABORATION)	2.40	50453	1.141	49.0
20. We set aside time to discuss what we learned from our professional development experiences. (OPPORTUNITIES FOR PROF. DEV'T & COLLABORATION)	2.57	50814	1.093	55.3
19. Substitutes are available to cover our classes when we observe each others' classes or engage in other professional development opportunities. (OPPORTUNITIES FOR PROF. DEV'T & COLLABORATION)	2.58	50874	1.228	56.0
3. We design evaluations of our professional development activities prior to the professional development program or set of activities. (OPPORTUNITIES FOR PROF. DEV'T & COLLABORATION)	2.60	50762	1.170	58.2
<b>Highest Ratings</b>				
1. Our principal believes teacher learning is essential for achieving our school goals. (LEADERSHIP)	3.62	51203	.649	93.5
38. Teacher professional development is part of our school improvement plan. (EQUITY)	3.44	50656	.763	88.9
33. Teachers show respect for all of the student sub-populations in our school (e.g. poor, minority). (EQUITY)	3.43	50900	.755	88.3
44. We are focused on creating positive relationships between teachers and students. (EQUITY)	3.40	50703	.781	87.8
45. Our principal fosters a school culture that is focused on instructional improvement. (LEADERSHIP)	3.40	50689	.837	87.1

Ratings are on a five point scale: 0=Never, 1=Seldom, 2=Sometimes, 3=Frequently, 4=Always.



as a whole staff to discuss ways to improve teaching and learning “frequently” or “always,” but opportunities to observe each others’ classroom instruction and to provide feedback to one another were less common: only 40% of teachers frequently observed each other, only 55% had time set aside to discuss what they learned from professional development experiences, and only 57% had frequent opportunities to give each other feedback. We saw a similar pattern in the SASS dataset, which showed low levels of agreement on items that asked teachers whether there was a great deal of cooperative effort and coordination among teachers in their schools.

The sample includes respondents from four states with the largest samples: Arizona, Alabama, Georgia, and Missouri

Evidence about the extent of teachers’ influence over their own professional development was comparable in both datasets. Just under half (48%) of public school teachers in the SASS dataset reported having moderate or great influence on the content of their in-service professional development. In the 4-state SAI sample, 49% of teachers reported that they could choose the types

of professional development they receive “frequently” or “always.”

Last we found differences in teachers responses based on the location of their schools. There were significant differences between the average ratings of teachers in urban versus non-urban schools/districts across 20 items. In most cases, these differences were significant at the .001 level, and in most cases with the exception of six items, these differences favored teachers in non-urban (suburban or small town) schools. For example, teachers in non-urban schools rated their schools’ professional development opportunities and practices more highly than did teachers in urban contexts. Similarly, in the SASS dataset, while a larger percentage of urban teachers reported participating in both formal and job-embedded professional development activities, a smaller percentage of them reported receiving school supports for professional development, including release time, and reimbursements for tuition, workshop/conference fees, and travel; they were less likely to have access to mentoring; and were less likely to report having an influence on school decisions and policies.

## Summary

Data from the 2003-04 Schools and Staffing Survey, the 2004-05 MetLife Survey of the American Teacher, and the 2007-08 NSDC SAI seem to be in general agreement that in recent years, there have been high levels of participation of teachers in professional development activity, and an increase in the participation of new teachers in induction and mentorship programs. Information from the SASS data indicate that 71% of beginning teachers had a master or mentor teacher assigned to support them, two-thirds took seminars or classes for beginning teachers, and half participated in common planning. However, it was much less common for beginning teachers to be provided with release time or reduced teaching loads in their first year of teaching and only about half of beginners had mentors in their subject area. In addition, these data do not provide information about the quality of the mentorship programs that were available to beginning teachers, and some teachers, especially those without mentors in their subject areas and those in high-need schools, do not rate the helpfulness of mentors as highly as do others. New teachers in urban schools with high percentages of minority, LEP, and low-

income students experience significantly lower rates of participation in induction and mentoring programs, and rate the helpfulness of the master/mentor teachers significantly lower, suggesting potential differences in access and quality.

From the SASS data, there also appear to be high levels of participation in formal professional development activities, particularly in workshops, conferences, and training sessions, with more than 90% of public school teachers across the nation reporting participation in this type of professional development. The focus of many of these formal training events was on teachers' content knowledge of the subject(s) they teach, with 83.4% of teachers participating in professional development on this topic. While this content-focused professional development is promising as a strategy to improve instruction, the intensity and duration of most of these learning activities has not deviated far from the traditional one-shot model of professional development. In most cases, contact hours across topics were less than 16 hours in length (2 days

or less), which has been shown by research to be generally insufficient for effecting real change in teachers' instructional practice and in student achievement. Research on effective models of professional development suggests that intensive and sustained efforts over a period of time are more likely to be effective in improving instruction than intermittent workshops with no follow-up mechanisms — a design that is typically not powerful enough to produce the impact desired.

Research also suggests that professional development is most effective when teachers engage actively in instructional inquiry in the context of collaborative professional communities, focused on instructional improvement and student achievement. From the 2003-04 SASS data, as well as the SAI, it is not clear that schools offer teachers the regularly scheduled time at the frequency that is needed to participate in this kind of activity on a regular basis. While 70% of teachers reported participating in “regularly scheduled collaboration with other teachers on issues of instruction,” it is unclear

what “regularly scheduled” means in terms of real frequency. A very low percentage of teachers across the nation (less than 20%) agreed that there was a “great deal of cooperative effort among staff members” and that they “make a conscious effort to coordinate the content of courses with that of other teachers.” It is unclear what the focus of teachers’ collaborative activity was, given that it did not result in perceptions of cooperative effort or curriculum coordination.

In addition, data from the SASS indicate that on most topics of professional development, fewer than 50% of teachers rated their professional development as useful. In addition, despite the higher ratings of content-focused professional development (60% rated it useful), teachers indicated that they desired further professional development on the content they teach, classroom management/discipline, and teaching students with special needs. With regard to teaching special needs students, only 36% of teachers agreed that they were given the supports they need to teach these students.

When compared with high-achieving countries around the world, the U.S. appears to be significantly behind in providing certain kinds of professional learning opportunities. The differences are especially marked with respect to observational visits to other classrooms and schools, collaborative action research, and regularly scheduled

collaboration among teachers on issues of instruction. It appears that teachers in the United States are not provided with nearly as much opportunity and support to engage in this kind of job-embedded learning in professional communities as those in many other countries.

Last, teachers in the U.S. appear to have less influence over school decisions and policies than those in other nations. A bare majority of U.S. teachers feel that they have some influence over curriculum and setting performance standards for students. Fewer than half of U.S. teachers perceived that

Professional development is most effective when teachers engage actively in instructional inquiry in the context of collaborative professional communities, focused on instructional improvement and student achievement.

they had some influence over the content of their in-service professional development and very few felt they had influence over other school policies and decisions affecting teacher hiring, evaluation, or deciding how the school budget will be spent. These figures suggest that teacher influence over decisions is considerably less common than is the case in other high-achieving nations, especially those in Scandinavia and the Pacific Rim. Teachers

in urban schools and in schools with high percentages of minority, LEP, and poor student enrollment were even less likely than those in suburban, rural, and more affluent, less diverse school contexts to report having influence over school decisions and policies. This might suggest that teachers in these contexts may not feel as empowered in their collaborative activity to make a real impact on decisions that affect them and their students.

Our review of the literature on high quality professional development and our analysis of the current status of teacher professional development in the United States reveal that U.S. public schools have a long way to go in terms of practicing what are known to be effective designs for powerful professional learning. This study raises a number of related questions that deserve further exploration. Some of these questions will be addressed in Phase 2 and 3 of the multiyear study.

- Why do so many U.S. districts and schools appear to lack the capacity to provide the kind of professional development that research shows is effective? What are the steps that states, districts, and schools should take to build this capacity?
- What kinds of organizational features support and facilitate effective professional development?
- How are states with higher student performance using professional development to achieve their results?
- How can the nation shift from ineffective professional development to effective professional development? What investments will be needed to make this transition?

- Given limited resources, what should be the focus of professional development and how should resources for professional development be targeted in terms of both content and teachers?
- How should states/districts/school systems monitor the quality of professional development that is provided within their jurisdictions?

Finally, while initial studies of professional learning communities (PLCs) are promising, the research literature is sparse and that the methodologies that have been used to study the impact of PLCs do not permit us to make causal inferences. There is a great need for more studies that would allow us to assess how different approaches to school-based professional learning communities influence teacher knowledge, instructional practice, and student achievement, as well as studies that examine the organizational factors that facilitate these practices. Such research would strengthen our ability to draw stronger conclusions about the ways that job-embedded professional development can be effective in promoting more powerful teaching and learning.

## Conclusions

A growing body of research on effective professional development models for teachers provides support for a new paradigm of teacher professional learning — one based on evidence about the kinds of experiences which appear to build teacher capacity and catalyze transformations in teaching practice resulting in improved student outcomes. This research allows us to assess the current status of professional development in the United States against a set of evaluative criteria. In addition, our examination of professional development policies and trends in high-achieving nations in the world allows us to evaluate and compare the status of professional development in the United States against these international benchmarks. Our analysis of the 2003-04 Schools and Staffing Survey, as well as data from the 2004-05 Met Life Survey and the 2007-08 NSDC Standards Assessment Inventory, provides us with a snapshot of how the United States is doing in terms of teachers' access to powerful professional learning opportunities nationally, across states, and in particular school contexts.

What we found from our analyses is that, while the United States has made some progress in certain areas such as the availability of induction and mentoring programs for beginning teachers and an increased emphasis on building teachers' content knowledge, the structures and supports that are needed to sustain teacher learning and change and to foster job-embedded professional development in collegial environments falls short. The time and opportunities that are needed for intense, sustained professional development with regular follow-up and reinforcement are simply not in place in most contexts, as evidenced by the short duration of most professional development activities. The low ratings of the usefulness

of most professional development activities and teachers' desire for further professional development on the content they teach, classroom management, teaching special needs students, and other topics, are indicators of the insufficiency of the professional development infrastructure now in place in most states and communities. The low levels of teachers' perceptions of their influence on school policies and low levels of agreement on cooperative effort and coordination among teachers are symptomatic of the lack of school governance structures and professional communities that involve teachers in collective decision making and problem-solving. It also appears that across different school contexts, there is unequal

Comparisons of American teachers' participation in professional development with that of teachers in the international community also demonstrate that the United States is substantially behind other OECD nations in providing the kinds of powerful professional learning opportunities that are more likely to build their capacity and have significant impacts on student learning.

access to and quality of induction supports, technology training, and opportunities for teachers to influence school policies.

Comparisons of American teachers' participation in professional development with that of teachers in the international community also demonstrate that the United States is substantially behind other OECD nations in providing the kinds of powerful professional learning opportunities that are more likely to build their capacity and have significant impacts on student learning. While American teachers participate in workshops and short-term professional development events at similar levels as that of OECD nations, the U.S. is far behind in providing public school teachers with opportunities to participate in extended learning opportunities and productive collaborative communities in which they conduct

research on education-related topics, work together on issues of instruction, learn from one another through mentoring or peer coaching, and collectively guide curriculum, assessment, and professional learning decisions.

Given what we know about the status of professional development opportunities for teachers in the United States, and the current lack of capacity and infrastructure of many school organizations to provide the kinds of powerful learning opportunities that teachers need to support student learning, the question that remains is — how can states, districts, and schools build their capacities to provide the kinds of high quality professional development that is effective in building teacher knowledge, improving their instruction, and supporting student learning?

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# Appendix A: Datasets and Methods

## SCHOOLS AND STAFFING SURVEY 2003-04

For our analyses of the status of professional development in the U.S., we used the School and Staffing Survey (SASS) dataset of 2003-04 (National Center for Education Statistics). SASS includes data on the characteristics and qualifications of teachers and principals, schools' teacher hiring practices, teachers' professional development, and a number of other characteristics of schools across the nation. The SASS dataset allows comparisons of public and private schools and staff and the sampling is representative of all states (and the District of Columbia) for public schools across the country.

We restricted our sample to schools and regular or itinerant teachers in the public sector. The total sample size was 40,520 teachers. In order to account for the stratified probability sample design scheme used in SASS we used two types of weighting variables. The first weight is the sampling weight which adjusts for non-response and oversampling and is used so that estimates represent the population rather than simply the sample. The replication weights are variables containing the necessary information for computing the standard errors of point estimates without giving away any information regarding the identity of any respondents. The use of both types of weights (probability and replication) is necessary for the correct calculation of point estimates and their standard errors.

We used information on teachers provided by two sources: the Teacher Questionnaire and the School Questionnaire. Each teacher and school in the SASS dataset has unique control numbers. Therefore, we were able to match teacher and school data by using the school control number. This allowed us to link the state and other schools context variables (school grade level, school location, percent minority enrollment, percent LEP enrollment, percent enrolled in the

Free and Reduced Lunch program) to teacher responses.

To aid our analysis, we created a number of composite variables that combined data from different variables included in the SASS data files. One composite variable assessed the extent of different kinds of induction support given to first-year teachers (similar in concept to Smith and Ingersoll's "induction packages" (2004) and Luczak's "induction power ratings" (2004)). Our first set of composite variables was the percentage of beginning teachers who reported receiving three out of the four most commonly reported induction supports (mentor, common planning time, seminars or classes, and regular supportive communication with administrators) the percentage of teachers who reported receiving all four of these supports, and the average number of these four supports teachers reported. A second similar set of composite variables included two additional but less commonly reported induction supports (reduced teaching schedule and reduced number of preparations). Another composite variable reporting the total days of teacher participation in formal professional development opportunities was created by combining the data on individual SASS survey items. Last, we created

our own “percent minority enrollment variable,” using the percentages of African-American, Latino/Hispanic, and Native American student enrollment reported in the School Questionnaires. For other school context variables (school grade level, school urbanicity, percent LEP enrollment, and percent of students enrolled in the Free and Reduced Lunch program), we utilized the created variables that were included in the SASS restricted-use dataset.

Our analysis consisted of two types of comparisons: state averages compared to the national average and comparisons of averages across quintiles or quartiles of specific student population characteristics. For the first type of comparison, we computed the national average for all variables of interest. Then, using the sampling and replication weights, we compared the average value of teachers’ responses in each state to the national average. In the summary tables in Appendix B, we noted state averages that were significantly higher than the national average ( $p < 0.01$ ).

Several characteristics of school communities that may be associated with differences in school academic performance and/or teacher working conditions were used to analyze participation rates in professional development: School grade level (elementary vs. secondary); School urbanicity (large city/central, urban fringe, small town/rural); School minority enrollment (divided into quintiles of minority enrollment); School poverty level as measured by the percentage of students eligible for the federal Free and Reduced Lunch program (divided into quartiles of the percentage enrolled); and percentage of students classified as Limited English Proficient (divided into quintiles of LEP enrollment). We divided two variables into quintiles instead of quartiles (per-

cent minority enrollment and percent LEP enrollment) because past research indicates that there are differences in the extreme groups of schools with the lowest and highest concentration of students with these demographic characteristics. (These school level data were obtained from the 2003-04 School Questionnaire which were completed by school administrators, and linked with the data from the Teacher Questionnaire.) Tables 2, 4, 6, 9, 10, 13, and 14 in Appendix B display the participation rates across these school context variables for all induction and professional development items. These tables highlight the cases in which the percentages are significantly higher or lower than the national average, but do not indicate when the percentages are significantly different between categories. In the summary tables in Appendix B, we noted significant differences ( $p < 0.01$ ) between the average value of teachers’ responses in each category with the national average. Differences between categories within the same variable are reported in the main body of this report.

The 2003-04 national averages for public school teachers are compared to findings from the 1999-2000 SASS administration, published by NCES (Choy, Chen, and Bugarin, 2006). We also compare findings from the 2003-04 SASS dataset with findings from other nationally representative surveys (e.g., the Met Life Survey of the American Teacher 2004-05; the 2006 NEA Survey of teachers on “Access, Adequacy, and Equity in Education Technology,” and with findings from a 4-state dataset from the 2007-08 National Staff Development Council’s Standards Assessment Inventory. These other datasets allow us to confirm or disconfirm our findings.

While teachers’ reports of participation in

various forms of professional development cannot be equated with access to or availability of opportunities for professional development because some of these opportunities are required and others are voluntary, we do make an inference that levels of participation are a reflection of the access and availability of professional development opportunities across states and in different school contexts.

## NATIONAL STAFF DEVELOPMENT COUNCIL: STANDARDS ASSESSMENT INVENTORY

Data from the most current administration of the survey (2007-08 academic year) were analyzed for this study. Because the survey sample is not a nationally representative sample, we made strategic choices about which states' samples to include in our analyses. Two states (Arizona and Georgia) have contracted with the NSDC to administer the survey across the entire state. The approximate response rates based on the total number of teachers currently teaching in public schools in each state are 33% for Georgia and 13% for Arizona. Missouri administers the survey on a voluntary basis, but almost all of the districts (56 districts) have agreed to administer the survey. The response rate in Missouri was 7%. One other state, Alabama, had the fourth largest sample in the 2007-08 administration and the response rate based on the total public school teacher population is 8%. Altogether, the number of teacher responses from public schools in these four states was just over 50,000. The data from these four states were combined and analyzed, and results were compared with results from the Schools and Staffing Survey (2003-04). Because most of the schools and districts that administered the survey did so on a volun-

tary basis (especially those in Alabama and Missouri), we make an assumption that this sample most likely represents the "best case scenario." Schools and districts that elected to participate in the survey were probably more likely to participate in the survey if they already perceived teachers' professional development to be an important component of school success and had made professional development a priority in their schools or districts.

Differences in ratings across items and across constructs were analyzed to assess the prevalence of particular professional development practices and supports, and differences in ratings between teachers in urban and non-urban contexts were also analyzed. The results from the 2007-08 SAI were then compared with findings from the SASS 2003-04 Teacher Questionnaire on items with similar content. However, because the scales on these two instruments are different, direct comparisons cannot be made. (The scale used across all 60 items on the SAI ranges from 0=Never to 4=Always. It serves as an indicator of the intensity or prevalence of the type of professional development practice or support across items.) In most cases, we compare the percentage of teachers with the two highest rating levels for each instrument. In the SAI, "frequently" and "always" are often combined to assess the prevalence of the school practice or support.<sup>1</sup> In the SASS dataset, we examine the percentage of teachers reporting whether they participated in a form of professional development (Yes/No), and the

<sup>1</sup>We include the responses in the "frequently" (3) and "always" (4) categories in our assessment of the prevalence of a professional development practice or support on the SAI. Although one could argue that the response "sometimes" (2) should be included, we decided not to include it because the addition of "sometimes" results in there being very little variation across items.

combined percentage of teachers reporting “agree” + “strongly agree” or the combined percentage of teachers reporting “moderate” or “great” influence.

When the developers of the SAI, the Southwest Educational Development Laboratory (SEDL), conducted factor analyses on average school level ratings in Georgia (Spring 2006), the results indicated that there were three factors, as below:

- Factor 1 had a total of 43 items, with a majority (i.e., 63% or 27 of the 43 items) of the items originally grouped under the standard titled “Process;”
- Factor 2 had 5 out of 7 items that corresponded to the standard category “Context” and contained meaning that may be interpreted as “Leadership;” the remaining 2 items corresponded to “Content” and “Process” standard categories but their content was subsumed under the leadership label;
- Factor 3 had 3 items exclusively derived from the standard category “Content,” specifically from the “Equity” category (Vaden-Kiernan, Hughes Jones, and McCann, 2008).

However, the first factor included so many items (43), representing two-thirds of the survey items across many different standards, that to some extent, the factor loses its value as a construct. We re-examined the constructs within the SAI, conducting factor analyses on the 2007-08 responses from one state, Georgia, which has the highest sample size among the four states. We used the same

procedures for factor analysis as those used by Vaden-Kiernan, Hughes Jones, and McCann (2008), except that we used individual teacher responses across all grades rather than school level averages across elementary grades only. We used the principal axis extraction method for non-normal distributions and the oblimin (oblique) rotation to allow for some correlation between factors. We obtained four factors that we analyzed for content and categorized them based on the content of the items:

- Factor 1 — Opportunities for Professional Development and Collaboration (20 items);
- Factor 2 — School Leadership (10 items);
- Factor 3 — Equity (9 items);
- Factor 4 — Teacher Influence and Collaboration (5 items)

(16 survey items did not load onto any of these four factors.)

To determine whether there were differences in teachers’ responses depending on the location of their schools, we coded each school as an urban or non-urban school depending on the location of the school or district. If the school or district was located in any of the major cities in each state, it was coded as an urban school or district. Approximately one-fifth of the teachers in the four-state SAI dataset sample were teaching in urban schools. In this case, one-way analysis of variance (ANOVA) was used to assess the differences in average ratings across SAI items depending on school urbanicity.



**Appendix B:**  
**Results from the 2003-04**  
**Schools and Staffing Survey**  
(NATIONAL CENTER FOR EDUCATION STATISTICS)

**Table 1: Professional Development for Teachers in First Year of Teaching (by state)**

	Percent of teachers who participated in induction program during first year of teaching	Teachers who received the following types of support during first year of teaching							
		a) Worked closely with master or mentor teacher in first year of teaching		b) Common Planning Time with teachers in their subject	c) Seminars or classes for beginning teachers	d) Regular supportive communication with principal, other administrators, or department chair	At least 3 of supports a-d	All 4 supports (a-d)	Avg. number supports (a-d)
		All	% master/mentor teachers in same subject area						
<b>Nat'l</b>	<b>68.1%</b>	<b>70.9%</b>	<b>73.3%</b>	<b>49.2%</b>	<b>67.6%</b>	<b>79.0%</b>	<b>60.5%</b>	<b>28.7%</b>	<b>2.67</b>
AL	59.7%	64.5%	82.3%	59.6%	66.5%	85.1%	63.8%	34.8%	2.76
AK	35.9%	39.5%	66.5%	28.5%	40.4%	63.2%	26.9%	5.9%	1.72
AZ	63.2%	63.2%	76.5%	38.3%	64.2%	69.4%	49.1%	22.0%	2.35
AR	45.7%	56.3%	56.0%	45.0%	41.3%	82.2%	40.7%	13.5%	2.25
CA	72.8%	67.8%	83.5%	50.8%	74.3%	76.5%	62.4%	31.2%	2.69
CO	83.1%	74.8%	77.6%	53.2%	69.6%	72.2%	60.7%	32.4%	2.70
CT	82.2%	70.6%	69.7%	37.6%	74.2%	76.6%	57.8%	27.0%	2.59
DE	78.3%	81.2%	82.2%	49.5%	73.9%	78.4%	69.5%	36.4%	2.83
DC	45.9%	56.7%	68.3%	56.5%	60.9%	76.4%	52.2%	27.8%	2.50
FL	71.5%	61.8%	75.1%	51.5%	76.5%	84.9%	62.8%	26.8%	2.75
GA	66.8%	71.9%	72.9%	63.5%	62.0%	79.1%	62.2%	37.0%	2.76
HI	43.3%	33.2%	71.0%	35.2%	51.3%	67.6%	32.1%	11.9%	1.87
ID	63.0%	62.7%	77.6%	39.3%	54.5%	76.3%	44.3%	22.5%	2.33
IL	67.1%	71.6%	75.8%	42.4%	62.2%	75.3%	54.6%	25.3%	2.51
IN	90.5%	89.1%	77.0%	45.8%	67.4%	77.3%	62.6%	30.9%	2.80
IA	70.7%	72.0%	61.9%	29.2%	58.5%	87.1%	56.3%	12.8%	2.47
KS	52.6%	59.5%	70.1%	31.6%	45.4%	71.5%	40.3%	11.3%	2.08
KY	79.8%	87.7%	57.9%	40.8%	50.2%	88.1%	61.2%	18.8%	2.67
LA	86.1%	79.4%	41.6%	51.4%	78.5%	81.4%	64.2%	39.9%	2.91
ME	63.7%	68.7%	71.0%	32.4%	42.9%	84.1%	41.9%	14.9%	2.28
MD	74.1%	63.9%	60.6%	52.5%	79.8%	69.7%	61.0%	30.5%	2.66
MA	64.3%	70.4%	72.7%	53.1%	51.5%	82.0%	52.1%	26.4%	2.57
MI	62.3%	69.8%	76.8%	35.4%	66.7%	75.7%	57.8%	25.7%	2.48
MN	55.9%	66.2%	73.8%	46.0%	55.7%	76.7%	56.0%	19.8%	2.45
MS	48.8%	63.0%	76.7%	58.2%	57.0%	85.0%	59.0%	30.0%	2.63
MO	86.9%	91.3%	79.6%	50.6%	87.9%	81.2%	75.7%	42.0%	3.11
MT	30.3%	45.0%	82.3%	25.6%	31.5%	69.7%	24.6%	12.8%	1.72
NE	63.8%	68.8%	66.6%	34.7%	56.4%	79.7%	48.1%	22.5%	2.40
NV	67.9%	53.0%	82.2%	34.6%	80.1%	79.0%	48.4%	17.4%	2.47
NH	47.5%	60.6%	75.9%	45.4%	41.0%	78.8%	41.5%	22.5%	2.26
NJ	72.1%	85.1%	82.5%	44.7%	65.6%	87.9%	66.9%	28.0%	2.83
NM	60.5%	76.6%	77.5%	46.6%	63.6%	69.7%	55.8%	26.8%	2.57
NY	55.3%	52.6%	67.6%	44.5%	63.9%	79.9%	51.0%	18.5%	2.41
NC	79.3%	86.3%	57.9%	60.2%	88.6%	76.2%	79.4%	40.3%	3.11
ND	33.0%	50.3%	78.4%	27.9%	39.0%	75.3%	34.2%	13.8%	1.93
OH	78.9%	80.5%	55.1%	48.8%	76.5%	80.8%	71.5%	31.1%	2.87
OK	84.9%	89.8%	76.6%	51.8%	49.6%	88.7%	64.4%	27.2%	2.80
OR	41.0%	60.4%	87.7%	37.0%	44.7%	65.0%	38.4%	19.0%	2.07
PA	89.1%	78.1%	79.2%	44.6%	69.9%	77.5%	61.2%	29.9%	2.70
RI	67.8%	60.8%	63.7%	30.0%	52.2%	80.8%	43.2%	13.7%	2.24
SC	95.9%	84.5%	74.7%	59.0%	93.7%	82.7%	82.2%	46.3%	3.20
SD	36.4%	47.5%	70.3%	37.2%	32.3%	73.5%	35.2%	13.7%	1.91
TN	60.0%	68.2%	80.3%	63.2%	71.1%	85.0%	66.6%	38.9%	2.88
TX	57.4%	73.0%	75.0%	58.3%	65.5%	81.8%	64.2%	32.9%	2.78
UT	70.6%	81.3%	79.4%	49.0%	82.7%	85.8%	72.0%	39.0%	2.99
VT	44.0%	52.7%	79.1%	34.6%	43.9%	75.0%	33.1%	16.2%	2.06
VA	72.2%	77.5%	80.8%	58.2%	74.9%	79.3%	71.0%	34.8%	2.90
WA	73.9%	78.7%	76.1%	32.9%	77.2%	68.3%	57.7%	21.0%	2.57
WV	68.1%	71.6%	59.6%	31.6%	68.6%	87.0%	62.5%	23.2%	2.59
WI	59.9%	65.6%	85.7%	48.3%	58.8%	72.8%	53.9%	26.7%	2.45
WY	54.1%	62.8%	not reported	41.8%	49.6%	75.4%	49.3%	12.7%	2.30

p < 0.01 higher than nat'l avg.

p < 0.001 higher than nat'l avg.

Table continues on next page



Teachers who received the following types of support during first year of teaching						Extent Master or Mentor Teacher Helped	
e) Reduced teaching schedule	f) Reduced number of preparations	At least 5 of the 6 supports (a-f)	All 6 supports (a-f)	Avg. number of 6 supports (a-f)	Extra classroom assistance (e.g., teacher aide) <sup>1</sup>	(Not at all=1; Some=2; Moderately=3; Greatly=4)	
						Avg.	Moderately or Greatly <sup>2</sup>
5.1%	8.0%	4.8%	1.6%	2.80	27.1%	2.72	74.0%
7.8%	12.6%	10.2%	3.6%	2.96	23.1%	3.16	85.8%
2.9%	3.2%	1.5%	0.0%	1.78	25.5%	2.48	68.7%
3.2%	4.7%	3.1%	1.2%	2.43	31.2%	2.51	68.3%
3.7%	8.7%	3.2%	2.1%	2.37	25.5%	2.56	67.5%
5.0%	8.3%	5.8%	0.7%	2.83	30.9%	2.69	74.7%
4.8%	9.3%	4.0%	1.8%	2.84	19.6%	2.96	80.6%
2.7%	3.4%	1.4%	0.8%	2.65	18.8%	2.50	69.5%
6.4%	10.4%	5.6%	5.2%	3.00	20.4%	2.38	62.0%
10.2%	10.6%	9.6%	7.1%	2.71	40.0%	2.51	68.5%
7.8%	11.5%	8.3%	3.3%	2.94	34.6%	2.64	74.6%
3.0%	10.8%	5.7%	1.2%	2.90	27.0%	2.95	79.1%
3.6%	10.1%	0.8%	0.8%	2.01	28.5%	2.46	66.3%
2.3%	7.6%	3.0%	0.0%	2.43	25.2%	2.80	77.1%
5.5%	7.8%	5.2%	1.4%	2.65	26.4%	2.93	81.6%
2.8%	4.9%	2.5%	0.7%	2.87	18.7%	2.53	70.0%
2.1%	2.5%	1.2%	0.9%	2.51	26.4%	2.59	71.2%
3.3%	8.2%	3.1%	1.0%	2.20	25.2%	2.38	64.8%
4.5%	7.9%	4.4%	2.6%	2.79	30.7%	3.11	82.7%
7.6%	10.0%	6.5%	3.2%	3.08	34.1%	2.66	73.7%
8.5%	7.3%	6.0%	2.6%	2.44	26.3%	2.87	79.3%
5.9%	7.3%	5.1%	1.0%	2.79	34.8%	2.51	67.3%
5.2%	6.3%	4.3%	1.8%	2.68	29.9%	2.54	69.1%
1.8%	5.3%	2.8%	0.5%	2.55	26.5%	2.54	70.6%
5.8%	6.0%	4.4%	1.3%	2.56	28.7%	2.63	72.6%
6.7%	13.6%	7.0%	2.6%	2.84	20.7%	3.03	81.1%
6.5%	8.8%	7.0%	2.5%	3.26	31.1%	2.58	68.7%
5.7%	4.3%	2.2%	0.0%	1.82	25.0%	2.52	68.4%
7.2%	6.3%	3.7%	1.4%	2.53	20.5%	2.44	69.2%
1.9%	6.7%	3.6%	1.3%	2.55	21.9%	2.84	75.4%
0.4%	4.3%	2.0%	0.0%	2.31	32.6%	2.67	78.6%
5.3%	3.6%	2.0%	0.7%	2.92	31.5%	2.80	74.7%
1.0%	8.5%	6.3%	0.5%	2.66	28.7%	2.75	73.7%
3.9%	4.2%	0.9%	0.5%	2.49	20.9%	2.81	75.0%
10.1%	13.8%	10.5%	4.0%	3.35	34.9%	2.65	73.0%
11.0%	8.5%	3.1%	2.4%	2.12	25.7%	2.86	75.8%
6.5%	10.0%	5.0%	1.1%	3.03	19.2%	2.77	74.0%
7.9%	10.6%	5.5%	3.5%	2.98	19.7%	2.78	75.3%
4.0%	6.7%	1.0%	0.5%	2.18	23.1%	2.54	68.3%
6.1%	10.2%	4.2%	2.9%	2.86	28.2%	2.73	74.2%
0.0%	1.0%	0.0%	0.0%	2.25	19.6%	2.74	77.8%
2.0%	14.4%	7.3%	0.4%	3.36	18.9%	2.69	72.4%
5.6%	7.4%	3.5%	0.0%	2.04	29.4%	2.82	76.2%
9.0%	12.2%	8.7%	3.7%	3.09	32.6%	2.86	78.7%
3.6%	7.1%	3.1%	1.1%	2.89	25.7%	2.85	75.8%
3.5%	5.9%	4.5%	0.5%	3.08	30.5%	2.74	75.0%
12.8%	9.8%	3.7%	2.1%	2.29	25.0%	2.52	66.3%
5.9%	8.2%	6.9%	1.8%	3.04	23.1%	2.46	65.7%
2.3%	5.1%	1.3%	0.3%	2.64	23.6%	2.43	67.5%
6.0%	9.8%	7.2%	3.3%	2.75	29.2%	2.22	63.2%
6.4%	9.6%	9.3%	2.3%	2.62	32.4%	2.80	77.0%
4.0%	7.3%	1.2%	0.0%	2.41	36.2%	2.57	70.6%

<sup>1</sup> Extra classroom assistance (e.g., teacher aide) is not included in the previous induction supports because we do not consider it to be an induction support.

<sup>2</sup> Statistical significance not reported for this item

**Table 2: Professional Development for Teachers in First Year of Teaching (by school context variables)**

		Percent of teachers who participated in induction program during first year of teaching	Teachers who received the following types of support during first year of teaching							Avg. number supports (a-d)
			a) Worked closely with master or mentor teacher in first year of teaching		b) Common Planning Time with teachers in their subject	c) Seminars or classes for beginning teachers	d) Regular supportive communication with principal, other administrators, or department chair	At least 3 of supports a-d	All 4 supports (a-d)	
			All	% master/mentor teachers in same subject area						
<b>National</b>		<b>68.1%</b>	<b>73.3%</b>	<b>73.3%</b>	<b>49.2%</b>	<b>67.6%</b>	<b>79.0%</b>	<b>60.5%</b>	<b>28.7%</b>	<b>2.67</b>
<b>School Level</b>	Elem.	68.1%	72.5%	74.4%	56.6%	69.6%	79.1%	64.2%	32.9%	2.78
	Sec	70.1%	68.6%	72.5%	34.8%	65.5%	78.5%	53.8%	21.5%	2.48
<b>Urbanicity</b>	City	63.5%	65.2%	73.5%	53.2%	70.4%	77.1%	59.3%	30.5%	2.66
	Urban Fringe	72.6%	74.0%	74.5%	48.7%	69.4%	79.8%	62.9%	29.5%	2.72
	Small Town/Rural	62.8%	72.2%	68.9%	42.3%	56.1%	80.4%	54.7%	22.3%	2.51
<b>% Minority Enrollment</b>	<10.5%	70.5%	59.0%	72.1%	50.0%	61.2%	77.4%	50.3%	26.2%	2.48
	10.5-23.0%	72.7%	68.4%	82.8%	52.1%	75.3%	81.7%	66.3%	30.2%	2.78
	23.0-44.6%	76.0%	75.5%	81.7%	41.5%	65.6%	74.0%	55.9%	23.4%	2.57
	44.6-77.0%	64.9%	64.9%	75.6%	45.8%	72.3%	75.9%	59.6%	31.7%	2.59
	>77.0%	68.4%	64.9%	77.5%	53.6%	67.2%	73.3%	57.5%	29.3%	2.59
<b>% Free/Reduced Lunch</b>	< 17.3%	75.0%	72.1%	76.3%	44.9%	65.7%	80.4%	60.3%	27.0%	2.63
	17.3-34.3%	70.5%	74.1%	73.9%	43.9%	67.8%	78.9%	60.9%	25.2%	2.65
	34.4-53.8%	66.0%	72.4%	73.8%	48.9%	67.9%	80.4%	61.5%	28.9%	2.70
	> 53.8%	64.5%	67.8%	71.1%	54.4%	68.4%	77.5%	59.8%	31.4%	2.68
<b>% LEP</b>	0%	68.4%	70.9%	72.8%	50.0%	66.1%	81.0%	60.4%	29.3%	2.68
	<2.5%	77.4%	70.6%	71.5%	35.6%	70.2%	77.1%	56.7%	22.5%	2.54
	2.5-5%	70.0%	65.0%	77.1%	48.9%	67.7%	78.8%	58.7%	30.0%	2.60
	5-10%	67.1%	71.6%	69.7%	53.1%	68.7%	80.1%	63.1%	30.8%	2.73
	>10%	65.8%	71.9%	74.5%	50.1%	68.8%	76.6%	61.2%	28.6%	2.68

p < 0.01 higher than nat'l avg.
p < 0.001 higher than nat'l avg.
p < 0.01 lower than nat'l avg.
p < 0.001 lower than nat'l avg.

*Table continues on next page*

Teachers who received the following types of support during first year of teaching						Extent Master or Mentor Teacher Helped (Not at all=1; Some=2; Moderately=3; Greatly=4)	
e) Reduced teaching schedule	f) Reduced number of preparations	At least 5 of the 6 supports (a-f)	All 6 supports (a-f)	Avg. number of 6 supports (a-f)	Extra classroom assistance (e.g., teacher aide) <sup>1</sup>	Avg.	Moderately or Greatly <sup>2</sup>
5.1%	8.0%	4.8%	1.6%	2.80	27.1%	2.72	74.0%
4.0%	5.1%	4.0%	1.2%	2.87	30.0%	2.74	74.4%
6.8%	14.5%	6.5%	2.4%	2.69	20.3%	2.69	73.4%
5.8%	7.7%	4.8%	1.8%	2.79	27.6%	2.76	74.9%
4.6%	7.7%	4.6%	1.5%	2.84	27.1%	2.71	73.6%
5.2%	9.7%	5.2%	1.6%	2.66	26.5%	2.71	74.0%
5.1%	6.7%	4.0%	2.6%	2.59	22.3%	2.96	79.6%
4.1%	9.7%	8.5%	1.2%	2.91	19.0%	2.79	78.2%
3.3%	7.6%	4.1%	1.0%	2.67	22.5%	2.83	76.6%
7.9%	10.4%	7.0%	2.1%	2.77	28.2%	2.65	73.5%
3.3%	4.8%	2.6%	0.3%	2.67	36.4%	2.55	71.7%
4.5%	8.2%	5.2%	1.5%	2.76	24.9%	2.72	73.6%
4.7%	8.9%	3.9%	1.5%	2.78	21.8%	2.65	72.8%
4.9%	8.5%	5.3%	1.7%	2.83	25.8%	2.67	72.4%
5.7%	7.2%	4.7%	1.6%	2.81	31.9%	2.79	76.0%
5.0%	8.8%	5.3%	1.6%	2.82	25.3%	2.79	75.7%
5.0%	11.1%	5.5%	1.8%	2.70	15.8%	2.68	75.2%
3.5%	7.3%	3.8%	0.9%	2.71	22.1%	3.09	82.3%
3.6%	8.6%	4.9%	1.7%	2.86	25.2%	2.64	73.5%
5.7%	6.5%	4.1%	1.6%	2.80	33.0%	2.60	70.4%

<sup>1</sup> Extra classroom assistance (e.g., teacher aide) is not included in the previous induction supports because we do not consider it to be an induction support

<sup>2</sup> Statistical significance not reported for this item

Source: National Center for Education Statistics, 2003-04 Schools and Staffing Survey

**Table 3: Formal Professional Development Activities and Supports in Last 12 Months (by state)**

Teachers participated in the following professional development activities in the past 12 months									
	University course(s) related to teaching		Observational visits to other schools		Workshops, conferences or training sessions in which they were a presenter		Other workshops, conferences or training sessions in which they were NOT a presenter		Avg. # of four activities participated in
	% of teachers	Avg. number	% of teachers	Avg. number	% of teachers	Avg. number	% of teachers	Avg. number	
<b>Nat'l</b>	<b>35.5%</b>	<b>2.75</b>	<b>22.4%</b>	<b>1.88</b>	<b>25.1%</b>	<b>2.27</b>	<b>91.5%</b>	<b>4.47</b>	<b>2.53</b>
AL	29.1%	3.24	29.7%	1.55	27.3%	2.16	95.1%	5.38	2.44
AK	75.4%	2.14	19.2%	1.26	24.0%	1.29	86.2%	2.82	2.33
AZ	41.8%	3.29	26.0%	1.84	25.7%	2.32	90.9%	5.88	2.12
AR	21.3%	2.53	19.3%	1.76	21.3%	2.84	96.3%	6.57	3.04
CA	41.9%	3.20	32.4%	2.19	26.3%	2.25	88.7%	4.20	2.29
CO	57.9%	2.27	29.2%	1.77	26.7%	1.65	90.0%	3.55	2.33
CT	21.8%	2.31	22.0%	1.65	28.8%	2.06	95.3%	5.60	2.37
DE	40.1%	2.76	19.5%	1.70	28.9%	2.89	95.3%	4.99	2.98
DC	70.0%	2.12	22.1%	1.68	37.1%	1.84	90.1%	3.81	1.63
FL	20.9%	2.83	16.8%	3.73	25.6%	2.66	91.0%	4.95	2.23
GA	28.1%	4.59	18.4%	1.75	21.2%	1.98	91.7%	3.85	2.11
HI	33.4%	2.07	25.3%	2.14	23.4%	1.73	93.5%	3.93	2.22
ID	78.8%	2.30	26.7%	1.51	24.0%	1.36	85.8%	2.10	2.87
IL	41.8%	2.98	21.9%	2.07	30.0%	2.89	89.2%	4.05	2.73
IN	33.6%	1.77	30.7%	1.50	21.8%	2.09	84.7%	3.16	2.99
IA	51.3%	1.79	18.7%	1.08	17.5%	1.52	84.4%	2.52	2.42
KS	48.6%	2.38	23.3%	1.43	23.6%	1.43	89.6%	4.00	2.92
KY	28.1%	3.51	21.3%	1.29	22.1%	1.96	94.6%	5.12	2.51
LA	24.7%	4.01	23.7%	2.06	24.8%	2.16	94.1%	5.14	2.61
ME	40.0%	1.47	29.1%	1.30	25.3%	1.64	92.8%	3.53	3.39
MD	46.6%	1.98	25.0%	1.54	32.4%	1.81	92.2%	3.78	2.43
MA	49.5%	1.94	17.3%	1.44	22.9%	1.74	91.8%	4.02	2.50
MI	37.5%	2.41	21.6%	1.47	22.0%	2.76	93.5%	4.26	2.82
MN	36.9%	2.85	27.3%	1.52	26.2%	1.82	92.9%	4.08	2.73
MS	29.1%	2.91	20.0%	1.85	25.0%	1.69	89.9%	3.99	2.50
MO	37.0%	2.98	21.3%	1.33	25.6%	3.13	92.5%	4.25	2.92
MT	57.9%	1.97	24.1%	1.43	24.2%	1.96	92.7%	3.42	2.79
NE	34.9%	2.08	20.0%	1.29	24.0%	1.49	91.0%	3.34	2.81
NV	51.9%	2.71	26.9%	1.83	30.2%	2.36	89.5%	3.53	2.11
NH	37.2%	1.70	35.5%	1.72	28.6%	1.76	96.8%	5.86	3.39
NJ	25.2%	3.15	19.0%	1.67	22.6%	2.56	93.5%	5.78	2.58
NM	40.7%	3.28	28.3%	1.77	28.5%	1.43	88.8%	3.98	2.78
NY	32.8%	3.82	19.5%	1.70	25.3%	3.13	93.2%	4.86	2.39
NC	25.8%	2.99	23.1%	2.82	23.1%	1.81	95.0%	4.59	2.36
ND	73.9%	1.93	18.8%	1.51	21.3%	1.75	88.0%	2.22	3.06
OH	51.9%	2.37	17.9%	1.45	22.1%	1.99	88.4%	3.49	2.82
OK	14.9%	3.36	21.8%	1.50	18.3%	2.06	93.7%	5.09	2.45
OR	43.8%	3.02	27.2%	1.62	24.0%	2.05	90.3%	3.15	2.84
PA	36.0%	2.88	15.7%	1.19	21.7%	2.24	89.5%	4.81	2.55
RI	48.0%	1.32	18.7%	1.50	26.3%	1.44	89.1%	3.33	2.52
SC	50.3%	2.07	23.6%	2.45	29.0%	1.74	89.8%	4.07	2.28
SD	69.8%	2.12	16.8%	1.20	18.1%	1.18	84.6%	1.97	3.00
TN	24.7%	3.06	24.7%	1.28	23.9%	1.72	94.1%	4.52	2.14
TX	14.7%	3.24	19.9%	2.43	27.2%	2.76	94.2%	5.99	2.51
UT	46.9%	2.95	38.8%	2.37	31.3%	2.18	94.2%	4.59	2.76
VT	53.5%	1.63	27.7%	1.52	23.4%	1.50	90.9%	3.15	3.69
VA	41.4%	1.49	16.2%	1.46	28.4%	1.62	92.4%	3.72	2.53
WA	43.8%	2.92	29.5%	1.85	27.4%	1.93	90.3%	4.00	2.82
WV	34.7%	1.66	14.0%	2.12	25.4%	1.50	91.6%	3.63	2.63
WI	56.3%	2.02	21.0%	1.56	20.9%	1.87	89.9%	2.42	2.77
WY	66.3%	2.61	23.8%	1.36	27.9%	1.84	91.8%	3.25	3.50

p < 0.01 higher than nat'l avg.

p < 0.001 higher than nat'l avg.

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Percent of teachers who received the following types of support for professional development in the past 12 months					
Release time	Scheduled time in the contract year	Stipend when outside regular work hours	Full or partial reimbursement of college tuition	Reimbursement for conference or workshop fees	Reimbursement for travel and/or daily expenses
54.0%	77.9%	38.3%	14.4%	40.5%	28.3%
57.9%	76.9%	40.5%	4.0%	32.0%	32.7%
49.5%	62.5%	43.2%	24.4%	27.5%	26.2%
48.7%	70.7%	34.7%	9.2%	32.3%	16.7%
62.7%	90.7%	29.9%	7.7%	55.0%	58.4%
53.6%	71.3%	46.0%	6.2%	32.0%	20.0%
49.3%	72.4%	38.1%	14.4%	40.9%	18.0%
56.4%	92.7%	19.6%	7.6%	42.5%	18.7%
47.0%	89.4%	56.3%	34.4%	45.1%	25.6%
43.4%	64.0%	23.3%	9.9%	13.2%	9.4%
50.7%	71.2%	48.2%	7.4%	27.4%	18.4%
52.3%	69.2%	37.7%	4.3%	28.7%	19.2%
65.7%	78.7%	30.6%	5.5%	25.8%	15.9%
51.7%	75.0%	32.7%	39.3%	49.8%	38.1%
53.0%	73.8%	35.1%	23.9%	52.5%	34.4%
69.5%	80.1%	45.4%	6.4%	53.8%	43.7%
46.2%	78.3%	36.9%	9.7%	41.0%	29.7%
59.3%	86.7%	36.7%	18.1%	50.9%	40.5%
39.4%	88.6%	39.3%	3.8%	39.1%	40.4%
52.6%	74.1%	63.5%	15.1%	30.3%	25.7%
67.9%	79.0%	36.4%	47.2%	65.2%	42.9%
46.9%	79.2%	48.7%	35.0%	23.3%	9.9%
51.5%	84.1%	37.0%	26.8%	35.6%	14.6%
64.0%	87.4%	34.4%	13.1%	52.9%	30.7%
59.7%	80.1%	40.0%	4.1%	54.6%	35.0%
56.2%	76.5%	29.0%	6.0%	38.8%	42.9%
58.5%	85.7%	35.5%	21.0%	51.9%	38.9%
55.9%	81.2%	41.1%	14.5%	43.6%	42.2%
55.0%	80.5%	57.4%	9.1%	44.9%	34.2%
55.8%	79.6%	32.5%	9.8%	19.7%	13.8%
68.3%	89.6%	42.6%	40.4%	68.3%	29.5%
59.2%	87.5%	25.5%	21.9%	43.9%	19.6%
60.0%	78.0%	44.6%	21.7%	39.7%	34.3%
55.2%	80.1%	34.6%	10.8%	36.5%	22.1%
48.4%	71.9%	29.0%	9.5%	45.5%	31.3%
50.5%	66.1%	61.7%	28.6%	53.0%	45.7%
56.5%	73.7%	47.2%	24.8%	45.7%	33.6%
50.0%	86.6%	36.4%	6.1%	34.3%	31.7%
51.8%	80.7%	29.8%	37.9%	56.1%	28.1%
42.6%	83.2%	28.3%	30.2%	39.5%	30.8%
64.2%	74.1%	47.7%	14.6%	42.3%	9.0%
37.5%	72.6%	27.0%	14.7%	37.8%	38.3%
51.2%	66.8%	47.8%	33.1%	53.4%	47.9%
49.0%	79.6%	30.4%	4.3%	26.5%	23.7%
60.4%	78.0%	35.7%	4.9%	39.0%	33.3%
61.6%	80.3%	55.4%	16.4%	43.2%	18.7%
68.7%	83.0%	33.9%	62.7%	77.4%	43.6%
41.9%	77.4%	30.5%	31.0%	43.5%	28.3%
49.6%	76.3%	57.4%	12.3%	52.7%	34.1%
49.4%	77.2%	55.7%	8.3%	32.0%	40.9%
56.1%	70.9%	36.0%	21.9%	54.0%	37.6%
70.4%	83.9%	45.6%	23.8%	63.6%	62.3%

Source: National Center for Education Statistics, 2003-04 Schools and Staffing Survey

**Table 4: Formal Professional Development Activities and Supports in Last 12 Months (by school context variables)**

Teachers participated in the following professional development activities in the past 12 months										
		University course(s) related to teaching		Observational visits to other schools		Workshops, conferences or training sessions in which they were a presenter		Other workshops, conferences or training sessions in which they were NOT a presenter		Avg. # of four above activities participated in
		% of teachers	Avg. number	% of teachers	Avg. number	% of teachers	Avg. number	% of teachers	Avg. number	
<b>Nat'l</b>		<b>35.5%</b>	<b>2.75</b>	<b>22.4%</b>	<b>1.88</b>	<b>25.1%</b>	<b>2.27</b>	<b>91.5%</b>	<b>4.47</b>	<b>2.53</b>
<b>School Level</b>	Elem.	36.1%	2.82	23.3%	1.91	25.0%	2.41	93.0%	4.82	2.55
	Sec	34.3%	2.62	20.0%	1.82	25.8%	1.98	88.5%	3.76	2.45
<b>Urbanicity</b>	City	36.8%	3.04	24.0%	1.89	28.0%	2.60	92.2%	5.45	2.29
	Urban Fringe	35.0%	2.67	21.8%	1.97	25.0%	2.19	91.0%	4.19	2.52
	Small Town/Rural	34.8%	2.52	21.5%	1.64	20.8%	1.85	92.0%	3.77	2.93
<b>% Minority Enrollment</b>	<10.5%	25.7%	2.71	20.2%	1.29	24.3%	2.02	93.3%	4.72	2.51
	10.5-23.0%	37.8%	2.96	27.0%	2.21	23.2%	1.81	89.6%	3.97	2.21
	23.0-44.6%	39.3%	2.50	31.8%	2.34	28.1%	2.04	88.9%	4.11	2.36
	44.6-77.0%	42.7%	3.00	30.6%	2.01	27.1%	2.30	89.3%	4.61	2.24
	>77.0%	45.5%	3.30	33.5%	1.41	26.3%	2.68	92.7%	5.98	2.53
<b>% Free/Reduced Lunch</b>	< 17.3%	37.1%	2.48	21.0%	1.89	26.2%	1.94	90.9%	3.89	2.62
	17.3-34.3%	36.7%	2.41	22.5%	1.76	23.8%	2.18	90.7%	3.98	2.55
	34.4-53.8%	32.7%	2.82	21.4%	2.06	23.8%	1.90	91.6%	4.26	2.55
	> 53.8%	35.6%	3.14	23.9%	1.84	26.0%	2.80	92.6%	5.34	2.45
<b>% LEP</b>	0%	33.9%	2.54	20.7%	1.60	23.4%	2.01	91.0%	4.28	2.57
	<2.5%	34.7%	2.78	17.0%	3.47	25.5%	1.97	90.5%	3.91	2.48
	2.5-5%	34.0%	2.69	21.4%	1.80	26.5%	1.94	91.5%	3.99	2.41
	5-10%	34.6%	2.89	21.1%	1.66	25.3%	2.01	91.7%	4.39	2.48
	>10%	38.2%	2.97	26.0%	2.00	26.8%	2.71	92.4%	4.93	2.53

p < 0.01 higher than nat'l avg.

p < 0.001 higher than nat'l avg.

p < 0.01 lower than nat'l avg

p < 0.001 lower than nat'l avg

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Percent of teachers who received the following types of support for professional development in the past 12 months					
Release time	Scheduled time in the contract year	Stipend when outside regular work hours	Full or partial reimbursement of college tuition	Reimbursement for conference or workshop fees	Reimbursement for travel and/or daily expenses
54.0%	77.9%	38.3%	14.4%	40.5%	28.3%
56.0%	79.2%	41.7%	14.3%	39.2%	24.9%
49.2%	75.1%	31.3%	14.3%	42.0%	33.3%
51.1%	77.6%	41.5%	10.5%	29.8%	18.9%
54.3%	77.8%	35.7%	15.7%	42.3%	26.1%
57.3%	78.5%	40.4%	16.5%	51.5%	48.6%
55.8%	81.1%	27.6%	7.6%	47.1%	31.8%
52.8%	74.1%	27.9%	5.8%	39.7%	20.4%
49.1%	72.6%	42.8%	6.7%	37.2%	27.2%
53.7%	70.5%	42.3%	5.6%	30.0%	21.9%
59.6%	78.3%	53.3%	10.5%	29.5%	21.6%
55.5%	78.3%	33.3%	18.8%	47.6%	28.4%
53.4%	78.1%	35.3%	15.7%	43.1%	29.4%
53.1%	77.8%	38.0%	13.1%	42.0%	30.8%
53.9%	77.5%	44.0%	11.3%	32.7%	25.7%
53.5%	78.0%	38.7%	15.0%	41.2%	30.3%
51.5%	76.3%	33.9%	14.6%	41.4%	30.6%
50.4%	76.7%	35.6%	13.7%	40.6%	24.5%
54.4%	79.9%	37.0%	10.9%	40.0%	26.0%
55.6%	77.9%	39.3%	14.3%	39.3%	26.4%

Source: National Center for Education Statistics, 2003-04 Schools and Staffing Survey

**Table 5: Focus of Professional Development Activities (by state)**

Percent of teachers who participated in the past 12 months in professional development activities focusing on:													
	The content of the subject(s) they teach					Uses of computers for instruction					Reading instruction		
	All	For 8 hours or less <sup>2</sup>	For 9-16 hours <sup>2</sup>	For 17-32 hours <sup>2</sup>	For 33 hours or more <sup>2</sup>	All	For 8 hours or less <sup>2</sup>	For 9-16 hours <sup>2</sup>	For 17-32 hours <sup>2</sup>	For 33 hours or more <sup>2</sup>	All	For 8 hours or less <sup>2</sup>	For 9-16 hours <sup>2</sup>
Nat'l	83.4%	22.9%	17.2%	20.3%	23.0%	64.9%	15.0%	37.4%	6.6%	6.8%	60.9%	16.8%	26.0%
AL	85.5%	25.3%	18.4%	21.4%	20.4%	74.0%	14.4%	46.9%	6.9%	5.8%	65.0%	16.4%	22.3%
AK	80.6%	18.1%	12.0%	20.7%	29.9%	62.9%	16.3%	31.0%	6.2%	9.4%	59.3%	14.9%	20.3%
AZ	81.9%	26.2%	14.3%	20.0%	21.4%	66.5%	14.5%	36.6%	9.2%	6.2%	71.2%	19.2%	31.5%
AR	88.0%	18.2%	12.0%	27.4%	30.5%	93.2%	30.2%	45.3%	10.0%	7.7%	62.3%	16.1%	28.3%
CA	84.3%	22.3%	12.4%	19.5%	30.0%	58.0%	11.2%	34.6%	5.5%	6.7%	70.7%	18.0%	25.6%
CO	86.2%	21.6%	12.0%	23.9%	28.7%	52.7%	10.6%	26.0%	6.2%	9.9%	68.1%	20.9%	26.8%
CT	86.4%	27.2%	21.3%	17.5%	20.4%	74.7%	20.6%	44.7%	5.9%	3.4%	64.4%	16.8%	33.2%
DE	90.8%	26.7%	20.3%	21.9%	21.9%	58.6%	12.5%	39.2%	2.5%	4.4%	66.6%	17.1%	33.6%
DC	82.8%	18.9%	19.9%	15.6%	28.4%	64.3%	18.4%	25.2%	11.7%	9.0%	72.6%	16.5%	29.2%
FL	82.7%	22.2%	15.9%	20.6%	24.1%	66.5%	16.3%	36.9%	6.8%	6.6%	75.3%	23.0%	27.6%
GA	84.1%	24.7%	15.9%	17.8%	25.8%	68.3%	15.1%	24.7%	8.2%	20.3%	61.3%	21.0%	24.3%
HI	82.1%	17.7%	11.4%	20.8%	32.2%	40.4%	6.5%	21.2%	5.0%	7.6%	70.5%	20.7%	23.7%
ID	80.9%	21.4%	10.7%	20.1%	28.7%	48.7%	13.0%	18.2%	8.5%	9.0%	54.0%	15.9%	14.8%
IL	83.8%	20.9%	22.8%	22.8%	17.3%	61.6%	12.4%	38.7%	6.4%	4.1%	62.1%	17.7%	27.9%
IN	76.3%	23.8%	19.7%	16.7%	16.1%	60.5%	8.9%	43.3%	4.8%	3.5%	61.4%	14.9%	30.1%
IA	75.5%	21.3%	15.7%	17.1%	21.3%	54.0%	10.9%	34.8%	4.5%	3.7%	64.3%	18.1%	25.4%
KS	78.8%	24.3%	18.0%	20.0%	16.4%	66.0%	14.1%	38.5%	7.4%	6.0%	68.4%	17.3%	35.2%
KY	83.3%	25.7%	16.2%	29.4%	12.0%	71.1%	15.0%	49.0%	4.0%	3.1%	58.7%	17.2%	33.4%
LA	83.2%	23.5%	24.3%	20.3%	15.0%	68.3%	11.5%	37.2%	8.0%	11.5%	55.5%	16.5%	24.3%
ME	81.9%	21.5%	10.2%	19.1%	31.1%	53.3%	10.6%	28.5%	7.2%	7.1%	46.9%	11.4%	17.3%
MD	82.6%	23.6%	21.9%	17.7%	19.3%	66.5%	11.9%	41.2%	7.7%	5.7%	75.9%	19.8%	31.5%
MA	85.7%	22.3%	11.7%	21.8%	29.9%	57.4%	13.8%	32.7%	5.3%	5.6%	53.4%	13.3%	19.9%
MI	85.0%	23.4%	19.2%	21.5%	20.9%	65.1%	14.3%	41.9%	4.2%	4.7%	56.5%	12.2%	25.1%
MN	81.1%	20.8%	16.4%	21.7%	22.2%	60.1%	11.8%	39.6%	4.6%	4.0%	60.9%	15.8%	31.6%
MS	76.4%	19.7%	22.9%	16.0%	17.9%	59.3%	13.6%	32.6%	7.7%	5.3%	51.2%	12.2%	21.9%
MO	83.6%	24.9%	22.0%	18.5%	18.2%	57.7%	11.0%	40.3%	3.3%	3.1%	62.5%	15.5%	30.5%
MT	82.8%	24.9%	10.8%	21.0%	26.1%	64.7%	18.0%	30.8%	6.2%	9.7%	53.5%	13.7%	22.4%
NE	82.5%	25.5%	18.1%	18.5%	20.4%	60.0%	13.2%	35.5%	7.0%	4.4%	58.8%	18.6%	26.5%
NV	78.2%	20.1%	12.2%	18.9%	27.0%	56.6%	16.1%	24.0%	8.7%	7.8%	68.0%	16.9%	24.3%
NH	93.8%	23.1%	8.2%	30.2%	32.3%	69.3%	14.4%	41.2%	6.0%	7.8%	56.0%	13.9%	21.7%
NJ	86.9%	26.7%	19.0%	24.1%	17.0%	68.9%	14.0%	45.5%	4.5%	4.9%	48.7%	14.8%	22.4%
NM	81.7%	23.8%	19.9%	17.9%	20.1%	60.9%	10.6%	34.2%	5.8%	10.4%	65.2%	17.9%	21.3%
NY	83.2%	24.3%	22.1%	18.1%	18.6%	59.7%	14.8%	35.0%	4.3%	5.5%	56.4%	16.2%	22.5%
NC	86.1%	23.8%	18.7%	21.8%	21.7%	77.2%	19.8%	41.0%	8.2%	8.1%	71.3%	19.2%	31.2%
ND	78.8%	22.7%	11.5%	20.4%	24.1%	70.6%	21.8%	28.0%	10.7%	10.1%	43.0%	12.1%	16.6%
OH	77.9%	22.1%	21.5%	14.8%	19.4%	62.1%	14.9%	35.9%	5.1%	6.2%	52.4%	11.8%	21.9%
OK	78.7%	24.2%	21.5%	15.6%	17.5%	65.9%	13.7%	41.1%	6.4%	4.6%	48.7%	11.8%	24.9%
OR	83.7%	23.5%	15.4%	19.7%	25.1%	54.3%	11.4%	33.5%	5.3%	4.1%	64.9%	15.0%	32.9%
PA	79.5%	21.7%	15.0%	20.6%	22.2%	69.5%	16.7%	38.5%	8.1%	6.3%	60.8%	16.6%	28.9%
RI	80.3%	25.9%	16.8%	17.7%	19.9%	41.6%	7.0%	26.6%	3.0%	4.9%	63.5%	18.8%	24.9%
SC	81.8%	24.7%	18.3%	15.3%	23.5%	68.7%	15.6%	32.9%	9.2%	10.9%	57.2%	11.3%	28.7%
SD	75.5%	20.8%	12.7%	15.3%	26.8%	59.5%	15.2%	23.1%	9.7%	11.5%	62.1%	13.8%	20.0%
TN	84.8%	23.7%	23.4%	18.9%	18.8%	68.5%	15.9%	38.9%	8.4%	5.3%	59.4%	17.0%	29.4%
TX	87.3%	20.8%	12.6%	23.6%	30.4%	70.5%	18.0%	38.6%	6.5%	7.4%	55.9%	16.7%	21.1%
UT	90.2%	21.0%	9.6%	23.8%	35.7%	68.6%	14.3%	35.0%	10.8%	8.5%	73.2%	16.7%	24.0%
VT	85.9%	19.5%	8.0%	26.0%	32.3%	56.0%	12.5%	33.6%	4.1%	5.8%	57.6%	16.3%	21.7%
VA	86.2%	24.8%	25.8%	19.6%	16.1%	77.3%	18.9%	42.4%	10.3%	5.7%	50.9%	12.8%	26.9%
WA	86.2%	19.5%	10.1%	23.8%	32.8%	59.2%	12.6%	28.9%	8.6%	9.2%	71.1%	21.4%	28.4%
WV	84.7%	22.0%	23.3%	18.9%	20.4%	82.2%	16.1%	47.4%	9.1%	9.6%	53.8%	12.5%	27.6%
WI	75.3%	22.8%	15.0%	16.0%	21.6%	63.2%	15.7%	31.8%	8.0%	7.8%	45.8%	10.1%	22.5%
WY	85.9%	22.7%	11.6%	21.4%	30.2%	62.8%	15.4%	32.0%	7.4%	8.0%	64.9%	16.8%	24.0%

p < 0.01 higher than nat'l avg.

p < 0.001 higher than nat'l avg.

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Percent of teachers who participated in the past 12 months in professional development activities focusing on:							Percent of teachers who in the last 3 years, had 8 hours or more of training or professional development on how to teach:	
Reading instruction cont.		Student discipline and management in the classroom					Special education students	Limited-English proficiency students
For 17-32 hours <sup>2</sup>	For 33 hours or more <sup>2</sup>	All	For 8 hours or less <sup>2</sup>	For 9-16 hours <sup>2</sup>	For 17-32 hours <sup>2</sup>	For 33 hours or more <sup>2</sup>		
10.1%	8.9%	43.5%	8.3%	31.1%	2.9%	2.1%	36.6%	32.1%
13.1%	13.3%	43.9%	6.4%	34.5%	2.5%	0.4%	47.7%	14.2%
12.3%	11.8%	35.4%	8.0%	19.4%	4.5%	3.5%	30.6%	26.0%
11.4%	9.2%	44.6%	9.5%	28.2%	4.9%	1.9%	31.0%	51.7%
10.0%	8.0%	46.2%	8.4%	34.5%	2.4%	0.8%	40.3%	23.6%
12.3%	14.7%	35.9%	7.5%	23.0%	2.4%	3.0%	37.5%	64.3%
8.6%	11.7%	34.4%	6.0%	24.1%	3.2%	1.1%	31.7%	29.5%
8.7%	5.7%	38.6%	5.2%	28.1%	3.0%	2.4%	32.6%	12.9%
11.4%	4.4%	49.4%	8.3%	34.2%	4.5%	2.3%	35.1%	8.4%
11.7%	15.2%	53.9%	14.9%	28.6%	4.7%	5.7%	48.0%	40.8%
11.9%	12.8%	44.6%	11.8%	27.4%	2.4%	3.1%	35.8%	52.2%
6.6%	9.4%	39.8%	7.6%	28.1%	1.5%	2.6%	34.3%	21.8%
14.1%	12.0%	36.4%	9.2%	19.3%	4.8%	3.1%	32.5%	21.5%
12.0%	11.3%	32.6%	8.5%	18.1%	3.2%	2.9%	27.0%	15.2%
11.7%	4.9%	45.0%	6.9%	34.5%	2.6%	1.1%	46.4%	17.2%
10.0%	6.4%	37.2%	5.8%	27.0%	2.0%	2.3%	21.9%	10.8%
9.6%	11.2%	36.7%	9.1%	21.7%	3.9%	2.1%	27.1%	15.7%
10.0%	5.9%	40.7%	7.3%	29.2%	2.9%	1.3%	25.1%	27.2%
4.8%	3.4%	54.3%	9.3%	40.6%	3.2%	1.2%	43.2%	10.6%
9.1%	5.6%	50.9%	9.5%	36.9%	2.0%	2.5%	30.6%	11.0%
9.2%	9.1%	29.1%	4.6%	19.1%	2.5%	3.0%	30.9%	20.1%
11.7%	13.0%	38.2%	8.0%	28.3%	1.2%	0.7%	39.5%	13.9%
8.6%	11.7%	37.2%	6.7%	24.3%	2.2%	4.0%	36.7%	22.3%
11.2%	8.0%	38.4%	7.6%	26.5%	2.3%	2.0%	26.2%	9.9%
7.0%	6.4%	47.3%	9.2%	29.5%	4.6%	4.1%	38.0%	26.1%
7.6%	9.4%	53.4%	10.1%	38.9%	2.2%	2.1%	28.2%	18.1%
8.5%	8.1%	49.1%	9.7%	34.1%	3.1%	2.2%	32.8%	9.8%
8.2%	9.2%	44.7%	8.8%	27.8%	4.8%	3.4%	29.6%	10.6%
7.7%	5.9%	46.1%	6.6%	34.2%	3.0%	2.3%	23.2%	23.5%
11.7%	15.0%	32.3%	7.3%	21.3%	2.4%	1.3%	27.6%	34.6%
10.8%	9.5%	53.3%	7.6%	37.9%	5.5%	2.3%	46.2%	7.7%
7.2%	4.2%	47.5%	6.1%	37.6%	2.3%	1.5%	31.8%	14.2%
11.5%	14.5%	38.7%	7.7%	26.2%	1.9%	2.8%	34.0%	42.3%
9.5%	8.1%	43.8%	5.5%	33.9%	2.0%	2.4%	38.6%	28.0%
12.9%	8.0%	41.8%	8.1%	29.8%	3.2%	0.7%	28.8%	14.1%
8.1%	6.3%	44.0%	12.7%	24.9%	4.1%	2.4%	30.4%	10.0%
10.4%	8.3%	39.9%	6.6%	27.9%	3.2%	2.3%	28.5%	7.8%
6.2%	5.8%	57.3%	6.7%	45.1%	4.2%	1.2%	28.2%	12.6%
8.5%	8.4%	42.9%	9.8%	30.7%	0.9%	1.5%	29.7%	37.3%
10.1%	5.3%	42.4%	7.0%	31.5%	1.9%	2.1%	33.0%	19.2%
8.7%	8.5%	28.0%	2.9%	20.8%	1.7%	2.6%	27.9%	18.0%
9.0%	8.2%	46.2%	9.6%	29.4%	4.7%	2.5%	24.2%	9.7%
12.9%	15.4%	38.9%	9.3%	23.2%	5.1%	1.2%	26.4%	16.9%
7.0%	6.0%	49.8%	9.5%	37.9%	1.4%	1.1%	31.6%	20.9%
10.0%	8.1%	56.1%	12.5%	37.6%	4.0%	2.1%	61.8%	42.7%
16.2%	16.3%	43.7%	10.9%	26.6%	2.8%	3.4%	32.0%	49.5%
11.8%	7.7%	43.2%	7.0%	25.2%	5.9%	5.1%	34.9%	13.0%
5.6%	5.6%	37.3%	4.7%	30.0%	1.3%	1.3%	35.8%	11.8%
15.3%	6.0%	39.6%	8.2%	25.2%	4.5%	1.7%	30.3%	21.7%
6.0%	7.7%	41.3%	6.2%	31.7%	1.3%	2.0%	27.8%	16.1%
6.2%	7.0%	39.9%	10.4%	19.2%	6.9%	3.5%	34.8%	10.8%
14.6%	9.5%	47.5%	9.3%	30.6%	4.5%	3.2%	31.5%	21.5%

<sup>2</sup> Statistical significance not reported for this item

Source: National Center for Education Statistics, 2003-04 Schools and Staffing Survey

**Table 6: Focus of Professional Development Activities  
(by school context variables)**

Percent of teachers who participated in the past 12 months in professional development activities focusing on:														
		The content of the subject(s) they teach					Uses of computers for instruction					Reading instruction		
		All	For 8 hours or less <sup>2</sup>	For 9-16 hours <sup>2</sup>	For 17-32 hours <sup>2</sup>	For 33 hours or more <sup>2</sup>	All	For 8 hours or less <sup>2</sup>	For 9-16 hours <sup>2</sup>	For 17-32 hours <sup>2</sup>	For 33 hours or more <sup>2</sup>	All	For 8 hours or less <sup>2</sup>	For 9-16 hours <sup>2</sup>
<b>Nat'l</b>		<b>83.4%</b>	<b>22.9%</b>	<b>17.2%</b>	<b>20.3%</b>	<b>23.0%</b>	<b>64.9%</b>	<b>15.0%</b>	<b>37.4%</b>	<b>6.6%</b>	<b>6.8%</b>	<b>60.9%</b>	<b>16.8%</b>	<b>26.0%</b>
<b>School Level</b>	Elem.	87.5%	22.6%	16.3%	21.1%	23.6%	65.0%	14.9%	38.0%	6.4%	6.3%	71.3%	17.7%	22.9%
	Sec	75.6%	23.5%	19.1%	18.9%	22.0%	65.1%	15.2%	36.2%	6.8%	7.7%	40.9%	13.7%	36.9%
<b>Urbanicity</b>	City	86.2%	21.8%	15.8%	21.5%	24.7%	63.0%	14.8%	36.4%	6.7%	7.5%	69.3%	17.0%	24.4%
	Urban Fringe	83.3%	23.6%	17.8%	19.6%	22.6%	65.8%	15.0%	37.6%	6.5%	6.5%	58.8%	17.1%	27.0%
	Small Town/Rural	79.3%	22.7%	17.9%	20.5%	21.7%	65.4%	15.2%	38.3%	6.6%	6.7%	54.0%	15.6%	26.3%
<b>% Minority Enrollment</b>	<10.5%	85.4%	24.9%	17.2%	23.0%	20.9%	77.1%	19.4%	44.3%	5.9%	5.5%	59.3%	16.9%	32.3%
	10.5-23.0%	82.6%	22.9%	16.3%	19.2%	26.1%	66.2%	16.9%	36.6%	6.4%	5.5%	62.0%	19.8%	30.5%
	23.0-44.6%	79.4%	26.3%	12.9%	20.7%	24.8%	60.4%	14.8%	38.9%	5.5%	5.2%	66.3%	17.9%	28.7%
	44.6-77.0%	83.1%	23.4%	12.8%	22.1%	26.3%	56.8%	13.8%	34.1%	7.9%	7.4%	69.2%	19.1%	28.5%
	>77.0%	91.1%	20.0%	12.2%	19.8%	32.3%	65.4%	12.1%	36.3%	6.9%	7.8%	79.3%	16.1%	20.6%
<b>% Free/Reduced Lunch</b>	< 17.3%	82.1%	24.7%	16.7%	20.0%	21.8%	66.6%	15.6%	36.9%	5.8%	6.3%	53.1%	16.0%	28.5%
	17.3-34.3%	82.1%	23.6%	18.9%	19.8%	21.1%	65.5%	15.0%	38.6%	6.6%	5.9%	56.1%	16.3%	29.2%
	34.4-53.8%	82.6%	22.6%	17.7%	19.9%	23.5%	64.1%	15.0%	37.6%	7.2%	6.7%	60.8%	17.3%	26.7%
	> 53.8%	85.6%	21.5%	16.2%	21.2%	24.8%	64.1%	14.5%	36.9%	6.7%	7.8%	69.5%	17.2%	22.7%
<b>% LEP</b>	0%	81.7%	22.4%	18.6%	20.5%	21.6%	65.5%	15.6%	37.0%	6.9%	6.7%	57.7%	16.5%	26.8%
	<2.5%	78.1%	24.3%	18.1%	18.6%	22.5%	67.2%	14.1%	36.8%	7.4%	8.0%	45.7%	14.3%	34.5%
	2.5-5%	82.4%	25.2%	14.8%	21.8%	22.1%	68.8%	14.5%	38.3%	6.5%	6.5%	61.5%	17.2%	29.5%
	5-10%	83.6%	22.9%	15.2%	19.2%	26.6%	66.5%	16.2%	38.4%	5.8%	5.6%	65.2%	18.2%	25.8%
	>10%	86.7%	22.9%	16.1%	20.4%	24.4%	62.8%	14.2%	37.7%	6.1%	6.9%	67.2%	17.2%	23.5%

p < 0.01 higher than nat'l avg.

p < 0.001 higher than nat'l avg.

p < 0.01 lower than nat'l avg.

p < 0.001 lower than nat'l avg.

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Percent of teachers who participated in the past 12 months in professional development activities focusing on:							Percent of teachers who in the last 3 years, had 8 hours or more of training or professional development on how to teach:	
Reading instruction cont.		Student discipline and management in the classroom					Special education students	Limited-English proficiency students
For 17-32 hours <sup>2</sup>	For 33 hours or more <sup>2</sup>	All	For 8 hours or less <sup>2</sup>	For 9-16 hours <sup>2</sup>	For 17-32 hours <sup>2</sup>	For 33 hours or more <sup>2</sup>		
10.1%	8.9%	43.5%	8.3%	31.1%	2.9%	2.1%	36.6%	32.1%
11.1%	9.9%	44.2%	8.3%	31.0%	2.9%	2.0%	37.3%	36.1%
6.9%	5.5%	40.7%	8.1%	31.7%	2.8%	2.3%	34.0%	23.8%
11.2%	9.4%	46.1%	8.0%	31.1%	3.5%	2.0%	38.3%	40.3%
9.6%	8.6%	42.2%	8.3%	30.7%	2.7%	2.2%	36.5%	28.7%
9.4%	9.1%	43.2%	9.0%	32.1%	2.3%	2.1%	33.9%	21.8%
11.1%	5.5%	33.0%	6.5%	31.2%	2.9%	0.8%	36.2%	22.0%
10.9%	7.3%	34.6%	8.9%	27.2%	2.0%	1.5%	36.0%	39.0%
11.6%	10.7%	36.6%	4.7%	28.1%	3.2%	2.3%	36.3%	44.8%
10.2%	11.7%	39.4%	7.6%	24.4%	2.8%	3.3%	37.6%	56.1%
13.0%	19.7%	44.7%	9.0%	24.4%	3.0%	2.0%	37.5%	71.4%
9.1%	7.2%	37.8%	7.5%	30.7%	3.1%	2.1%	35.4%	20.8%
8.8%	7.5%	41.2%	7.7%	31.2%	2.5%	2.2%	33.6%	23.0%
9.8%	9.3%	45.3%	8.1%	31.5%	2.9%	2.2%	37.4%	30.7%
11.6%	10.4%	47.7%	9.3%	30.9%	3.0%	2.1%	38.6%	43.1%
9.7%	7.6%	42.1%	8.5%	31.6%	2.4%	2.2%	31.9%	0.0%
8.0%	6.4%	41.4%	7.5%	31.0%	3.7%	2.5%	31.4%	12.8%
10.4%	6.6%	39.6%	8.2%	32.9%	2.3%	1.4%	30.2%	20.3%
11.0%	7.7%	44.0%	9.2%	30.2%	3.7%	1.5%	28.6%	22.9%
10.6%	11.4%	46.3%	8.2%	30.4%	3.3%	2.2%	46.1%	43.2%

<sup>2</sup> Statistical significance not reported for this item

Source: National Center for Education Statistics, 2003-04 Schools and Staffing Survey

**Table 7: Usefulness of Professional Development in Last 12 Months  
(by state)**

How useful to teachers professional development activities attended within the last 12 months with the following foci were (Not useful=1; Somewhat useful=2; Useful=3; Very useful=4)								
	The content of the subject(s) they teach		Uses of computers for instruction		Reading instruction		Student discipline and management in the classroom	
	Avg.	Useful or Very Useful <sup>2</sup>	Avg.	Useful or Very Useful <sup>2</sup>	Avg.	Useful or Very Useful <sup>2</sup>	Avg.	Useful or Very Useful <sup>2</sup>
Nat'l	2.42	59.3%	2.22	42.7%	2.40	42.5%	2.11	27.4%
AL	2.48	62.2%	2.44	52.4%	2.56	47.9%	2.10	27.5%
AK	2.54	59.0%	2.33	42.3%	2.50	41.7%	2.17	22.8%
AZ	2.41	58.1%	1.93	37.0%	2.30	47.8%	2.21	28.6%
AR	2.36	61.5%	2.06	57.2%	2.49	44.9%	1.99	27.5%
CA	2.46	60.9%	1.99	33.1%	2.31	46.9%	2.25	23.2%
CO	2.51	63.4%	2.16	33.0%	2.29	44.9%	2.08	20.8%
CT	2.24	56.8%	2.23	50.3%	2.29	43.1%	2.14	24.7%
DE	2.37	63.1%	2.31	40.1%	2.40	46.3%	2.19	30.7%
DC	2.88	67.9%	2.94	53.7%	2.96	61.0%	2.50	38.8%
FL	2.54	61.3%	2.38	46.4%	2.40	51.8%	2.23	27.7%
GA	2.44	60.7%	2.63	52.8%	2.38	42.3%	2.37	27.5%
HI	2.58	60.8%	2.41	28.2%	2.35	47.1%	2.25	24.0%
ID	2.44	58.5%	2.27	32.2%	2.63	40.9%	2.22	20.9%
IL	2.42	59.1%	2.25	41.8%	2.40	42.9%	2.08	27.1%
IN	2.50	55.8%	1.93	34.5%	2.40	43.0%	1.98	22.0%
IA	2.42	54.2%	2.05	33.4%	2.20	41.1%	2.22	24.2%
KS	2.32	54.1%	2.05	39.5%	2.00	39.6%	2.16	26.8%
KY	2.27	55.5%	2.26	47.7%	2.39	41.0%	2.21	35.3%
LA	2.63	63.8%	2.50	48.3%	2.70	43.0%	2.31	34.2%
ME	2.68	64.1%	2.40	37.1%	2.69	35.4%	1.97	17.0%
MD	2.16	51.2%	2.08	39.8%	1.96	42.7%	1.98	21.7%
MA	2.40	61.2%	2.19	37.1%	2.44	37.4%	2.13	23.0%
MI	2.35	59.5%	2.09	39.7%	2.36	38.8%	2.01	23.4%
MN	2.40	57.0%	2.04	36.6%	2.29	40.4%	2.16	30.5%
MS	2.43	54.1%	2.47	41.7%	2.70	39.3%	2.16	33.9%
MO	2.47	60.0%	2.07	35.0%	2.46	43.7%	1.97	28.4%
MT	2.62	63.8%	2.37	45.7%	2.33	36.0%	2.26	29.4%
NE	2.44	59.1%	2.26	39.3%	2.34	40.2%	2.16	29.6%
NV	2.40	54.3%	2.40	38.9%	2.44	47.4%	2.23	21.1%
NH	2.68	73.0%	2.26	44.6%	2.70	42.7%	2.13	33.1%
NJ	2.51	64.2%	2.20	43.8%	2.61	36.3%	2.02	28.3%
NM	2.32	55.2%	2.22	38.8%	2.43	43.9%	1.90	21.2%
NY	2.26	55.2%	2.14	37.2%	2.29	36.3%	1.99	25.0%
NC	2.43	62.1%	2.24	51.4%	2.32	48.1%	2.19	26.7%
ND	2.49	57.5%	2.30	48.3%	2.69	33.3%	2.32	30.6%
OH	2.30	52.6%	2.22	40.2%	2.55	38.1%	2.18	25.8%
OK	2.31	53.1%	1.96	37.5%	2.29	32.7%	1.75	29.9%
OR	2.31	56.4%	1.98	32.1%	2.19	41.5%	1.96	25.2%
PA	2.32	54.2%	2.21	44.6%	2.26	39.4%	1.89	23.2%
RI	2.50	56.8%	2.05	24.6%	2.41	40.3%	2.08	16.4%
SC	2.31	54.4%	2.53	49.2%	2.36	38.1%	1.98	27.1%
SD	2.63	58.2%	2.43	43.1%	2.46	44.0%	2.19	25.4%
TN	2.33	57.8%	2.29	45.3%	2.54	43.4%	2.01	29.5%
TX	2.51	64.9%	2.32	47.5%	2.64	42.2%	2.10	35.0%
UT	2.85	74.5%	2.45	49.0%	2.76	57.1%	2.59	33.3%
VT	2.93	50.9%	2.15	35.2%	2.64	41.9%	2.21	28.6%
VA	2.20	55.8%	2.28	51.8%	2.37	35.4%	2.03	22.3%
WA	2.53	64.0%	2.34	40.1%	2.27	46.2%	2.01	23.3%
WV	2.41	60.0%	2.15	51.9%	2.41	37.9%	1.96	24.3%
WI	2.36	51.2%	2.11	38.1%	2.33	30.9%	2.38	28.0%
WY	2.70	68.0%	2.32	43.3%	2.56	47.9%	2.19	31.5%

p < 0.01 higher than nat'l avg.

p < 0.001 higher than nat'l avg.

**Table 8: Influence Teachers Believe They Have Over School Policy (by state)**

How much influence teachers have over school policy in: (1=None, 2=Minor, 3=Moderate, 4=Great)													
Setting performance standards for students		Establishing curriculum		Determining the content of in-service professional development programs		Evaluating teachers		Hiring full-time teachers		Setting discipline policy		Deciding how the school budget will be spent	
Avg.	Moderate or Great <sup>2</sup>	Avg.	Moderate or Great <sup>2</sup>	Avg.	Moderate or Great <sup>2</sup>	Avg.	Moderate or Great <sup>2</sup>	Avg.	Moderate or Great <sup>2</sup>	Avg.	Moderate or Great <sup>2</sup>	Avg.	Moderate or Great <sup>2</sup>
2.56	54.8%	2.67	59.2%	2.45	48.2%	1.66	15.9%	1.84	23.4%	2.39	46.0%	1.85	21.9%
2.84	67.8%	2.54	53.8%	2.70	62.1%	1.64	16.7%	1.54	12.4%	2.42	47.8%	2.59	56.6%
2.40	46.7%	2.67	56.5%	2.41	47.2%	1.65	14.5%	1.93	26.8%	2.53	51.1%	1.96	26.7%
2.50	49.2%	2.60	55.9%	2.45	48.5%	1.75	18.8%	2.03	32.3%	2.40	47.5%	1.77	18.8%
2.47	49.8%	2.72	62.8%	2.38	45.8%	1.66	15.5%	1.63	15.3%	2.30	41.5%	1.53	11.1%
2.54	53.9%	2.58	53.7%	2.45	48.7%	1.66	16.2%	1.89	24.5%	2.47	48.9%	2.15	34.1%
2.56	55.5%	2.76	62.6%	2.38	43.0%	1.62	14.6%	2.40	48.1%	2.44	47.7%	2.03	30.3%
2.68	59.9%	2.92	70.0%	2.49	50.5%	1.78	19.9%	1.98	27.3%	2.41	46.6%	1.89	23.9%
2.25	42.3%	2.56	54.2%	2.28	40.3%	1.47	8.9%	1.76	20.4%	2.32	43.6%	1.84	20.3%
2.39	48.8%	2.30	43.3%	2.45	51.8%	1.62	13.7%	1.83	24.0%	2.49	53.0%	2.03	29.8%
2.53	53.1%	2.62	57.0%	2.51	50.2%	1.73	17.8%	1.79	19.6%	2.43	47.8%	1.96	25.4%
2.61	57.1%	2.31	42.2%	2.49	49.7%	1.58	12.7%	1.61	14.5%	2.35	44.7%	1.79	19.2%
2.58	56.3%	3.11	77.7%	2.63	56.8%	1.68	17.3%	1.61	14.8%	2.46	48.3%	2.31	40.1%
2.56	54.0%	2.74	62.2%	2.34	42.8%	1.62	12.8%	1.99	29.0%	2.43	47.5%	1.77	16.6%
2.71	61.3%	3.01	75.5%	2.58	54.4%	1.74	18.3%	1.86	24.5%	2.45	49.6%	1.74	17.2%
2.57	55.1%	2.67	59.4%	2.51	49.7%	1.61	14.3%	1.66	16.3%	2.40	46.6%	1.64	14.2%
2.86	67.2%	3.15	79.6%	2.23	34.4%	1.60	11.1%	1.97	27.5%	2.50	50.7%	1.62	13.9%
2.67	59.9%	2.85	67.2%	2.48	47.3%	1.61	13.7%	1.77	19.6%	2.48	50.5%	1.65	11.7%
2.71	63.0%	2.87	68.3%	2.70	60.6%	1.81	20.0%	2.29	40.2%	2.73	60.6%	2.24	37.4%
2.61	57.1%	2.40	47.8%	2.45	47.3%	1.75	20.0%	1.49	11.6%	2.35	44.1%	1.73	17.9%
2.79	67.6%	3.10	79.4%	2.39	44.2%	1.80	20.1%	2.20	36.7%	2.55	54.9%	2.08	32.9%
2.28	42.0%	1.93	26.1%	2.26	39.9%	1.50	10.1%	1.51	12.2%	2.27	39.8%	1.73	14.2%
2.65	58.4%	2.65	58.7%	2.33	41.4%	1.62	13.1%	1.82	23.2%	2.28	40.0%	1.72	16.6%
2.66	59.1%	2.63	55.8%	2.31	38.6%	1.55	11.4%	1.91	25.5%	2.41	47.5%	1.69	15.2%
2.57	53.1%	3.01	74.1%	2.67	59.4%	1.75	15.8%	2.27	38.7%	2.58	53.7%	1.91	19.8%
2.64	59.6%	2.48	52.8%	2.40	46.8%	1.71	18.3%	1.50	12.2%	2.23	40.4%	1.57	13.9%
2.62	58.7%	2.99	71.8%	2.76	63.8%	1.73	18.1%	1.78	19.9%	2.42	47.0%	1.77	17.5%
2.83	66.5%	3.08	77.0%	2.64	59.6%	1.64	14.3%	1.72	15.8%	2.58	54.8%	1.74	16.1%
2.73	62.7%	2.88	66.4%	2.28	38.8%	1.56	11.9%	1.69	17.1%	2.41	46.7%	1.70	15.0%
2.52	51.1%	2.39	45.8%	2.55	49.9%	1.48	10.6%	1.65	18.3%	2.37	44.0%	2.08	29.5%
2.76	64.5%	3.02	75.4%	2.54	52.3%	1.81	22.0%	2.25	39.8%	2.46	48.7%	2.14	34.6%
2.52	54.0%	2.80	63.5%	2.47	48.8%	1.55	12.5%	1.54	12.9%	2.25	39.7%	1.64	13.1%
2.49	50.8%	2.67	58.7%	2.25	37.2%	1.58	14.3%	1.90	27.5%	2.25	41.1%	1.83	21.4%
2.44	49.1%	2.68	59.9%	2.39	45.1%	1.68	17.0%	2.02	31.7%	2.24	38.5%	1.65	13.0%
2.44	48.7%	2.29	43.6%	2.59	56.8%	1.96	25.1%	1.80	19.9%	2.49	50.4%	2.04	27.5%
2.78	66.2%	3.07	76.8%	2.49	48.5%	1.60	11.2%	1.81	21.5%	2.57	55.4%	1.59	10.8%
2.42	48.9%	2.57	55.8%	2.44	48.7%	1.60	12.1%	1.74	18.2%	2.40	47.0%	1.65	11.9%
2.50	52.9%	2.74	63.7%	2.57	54.0%	1.60	13.8%	1.54	13.4%	2.25	41.0%	1.59	12.7%
2.56	55.9%	3.04	75.6%	2.55	49.6%	1.65	14.0%	2.37	45.8%	2.65	57.9%	2.03	28.3%
2.44	48.1%	2.73	60.7%	2.25	38.3%	1.47	9.9%	1.52	10.8%	2.20	35.6%	1.78	19.7%
2.75	66.2%	2.80	68.9%	2.58	55.8%	1.79	20.8%	1.90	24.3%	2.41	45.4%	1.82	19.1%
2.63	60.5%	2.67	58.9%	2.55	54.6%	1.96	26.8%	1.81	21.7%	2.39	44.9%	1.85	21.4%
2.66	58.8%	2.94	70.5%	2.43	45.8%	1.60	13.4%	1.71	18.3%	2.41	48.9%	1.62	11.2%
2.47	50.3%	2.38	47.4%	2.46	47.3%	1.51	11.3%	1.48	9.9%	2.37	48.3%	1.80	22.8%
2.61	56.3%	2.66	60.2%	2.34	42.7%	1.70	17.7%	1.94	28.4%	2.31	43.3%	1.94	26.9%
2.73	60.0%	2.69	57.8%	2.67	57.9%	1.74	17.0%	2.08	31.7%	2.73	63.0%	2.03	27.6%
2.92	71.9%	3.26	84.8%	2.63	53.5%	1.83	19.5%	2.50	52.4%	2.67	59.3%	2.16	32.7%
2.41	47.3%	2.41	47.2%	2.39	45.3%	1.68	17.8%	1.57	13.8%	2.25	39.2%	1.75	18.7%
2.61	56.1%	2.80	62.3%	2.53	52.6%	1.60	13.7%	2.36	43.8%	2.60	53.8%	2.08	28.6%
2.61	58.4%	2.56	54.5%	2.55	52.8%	1.47	12.6%	1.38	7.7%	2.59	55.2%	2.09	30.8%
2.68	60.2%	3.04	77.2%	2.54	51.4%	1.69	15.4%	2.24	38.1%	2.59	53.4%	1.96	25.2%
2.63	58.2%	2.84	67.8%	2.49	51.3%	1.64	14.3%	2.21	37.0%	2.49	50.9%	2.15	33.7%

<sup>2</sup> Statistical significance not reported for this item

Source: National Center for Education Statistics, 2003-04 Schools and Staffing Survey

**Table 9: Usefulness of Professional Development in Last 12 Months (by school context variables)**

How useful to teachers professional development activities attended within the last 12 months with the following foci were (Not useful=1; Somewhat useful=2; Useful=3; Very useful=4)									
		The content of the subject(s) they teach		Uses of computers for instruction		Reading instruction		Student discipline and management in the classroom	
		Avg.	Useful or Very Useful <sup>2</sup>	Avg.	Useful or Very Useful <sup>2</sup>	Avg.	Useful or Very Useful <sup>2</sup>	Avg.	Useful or Very Useful <sup>2</sup>
<b>Nat'l</b>		<b>2.42</b>	<b>59.3%</b>	<b>2.22</b>	<b>42.7%</b>	<b>2.40</b>	<b>42.5%</b>	<b>2.11</b>	<b>27.4%</b>
<b>School Level</b>	Elem.	2.46	60.6%	2.25	43.3%	2.54	44.8%	2.18	28.2%
	Sec	2.31	56.3%	2.17	41.8%	1.89	33.9%	1.93	25.2%
<b>Urbanicity</b>	City	2.41	59.1%	2.28	43.4%	2.35	42.0%	2.09	27.2%
	Urban Fringe	2.43	59.7%	2.19	42.1%	2.41	42.8%	2.13	27.4%
	Small Town/Rural	2.40	58.4%	2.21	43.3%	2.43	42.4%	2.07	27.9%
<b>% Minority Enrollment</b>	<10.5%	2.27	58.0%	2.12	46.7%	2.31	43.7%	2.22	26.9%
	10.5-23.0%	2.53	63.0%	1.96	37.8%	2.31	46.2%	2.16	25.6%
	23.0-44.6%	2.34	58.2%	1.94	36.5%	2.23	44.2%	2.03	22.8%
	44.6-77.0%	2.46	61.5%	2.12	39.3%	2.14	43.1%	2.26	24.8%
	>77.0%	2.61	63.4%	2.27	41.4%	2.68	52.8%	2.29	25.3%
<b>% Free/Reduced Lunch</b>	<17.3%	2.44	59.8%	2.20	41.7%	2.35	40.7%	2.09	26.7%
	17.3-34.3%	2.34	57.3%	2.17	42.4%	2.28	40.1%	2.07	26.4%
	34.4-53.8%	2.36	58.2%	2.19	42.9%	2.29	41.8%	2.07	27.0%
	>53.8%	2.49	60.9%	2.29	43.5%	2.55	45.1%	2.17	28.7%
<b>% LEP</b>	0%	2.33	57.2%	2.23	43.3%	2.37	41.3%	2.10	27.5%
	<2.5%	2.37	57.5%	2.17	42.3%	2.03	36.2%	1.91	24.9%
	2.5-5%	2.37	58.2%	2.17	41.6%	2.28	42.2%	1.96	25.5%
	5-10%	2.46	60.9%	2.19	42.0%	2.41	43.2%	2.16	28.2%
	>10%	2.52	61.9%	2.24	42.4%	2.50	44.5%	2.17	27.9%

p < 0.01 higher than nat'l avg.

p < 0.001 higher than nat'l avg.

p < 0.01 lower than nat'l avg

p < 0.001 lower than nat'l avg

**Table 10: Influence Teachers Believe They Have Over School Policy  
(by school context variables)**

How much influence teachers have over school policy in: (1=None, 2=Minor, 3=Moderate, 4=Great)													
Setting performance standards for students		Establishing curriculum		Determining the content of in-service professional development programs		Evaluating teachers		Hiring full-time teachers		Setting discipline policy		Deciding how the school budget will be spent	
Avg.	Moderate or Great <sup>2</sup>	Avg.	Moderate or Great <sup>2</sup>	Avg.	Moderate or Great <sup>2</sup>	Avg.	Moderate or Great <sup>2</sup>	Avg.	Moderate or Great <sup>2</sup>	Avg.	Moderate or Great <sup>2</sup>	Avg.	Moderate or Great <sup>2</sup>
2.56	54.8%	2.67	59.2%	2.45	48.2%	1.66	15.9%	1.84	23.4%	2.39	46.0%	1.85	21.9%
2.56	54.9%	2.57	54.4%	2.48	49.1%	1.65	15.6%	1.86	24.5%	2.47	50.0%	1.91	24.0%
2.55	53.9%	2.85	67.5%	2.40	46.1%	1.69	16.3%	1.81	21.6%	2.21	36.9%	1.77	18.4%
2.48	51.1%	2.46	50.0%	2.40	46.1%	1.65	15.8%	1.81	23.4%	2.33	43.5%	1.88	23.7%
2.58	55.1%	2.71	60.8%	2.47	48.7%	1.67	16.0%	1.88	24.6%	2.40	46.3%	1.87	21.9%
2.65	59.6%	2.86	68.5%	2.49	50.1%	1.66	15.6%	1.77	20.1%	2.45	48.8%	1.79	19.3%
2.64	57.7%	2.84	67.0%	2.56	55.4%	1.73	19.4%	1.98	29.5%	2.45	49.2%	1.97	28.6%
2.69	60.9%	2.84	69.0%	2.52	51.5%	1.71	17.6%	2.11	34.3%	2.47	51.1%	2.05	30.4%
2.48	51.3%	2.63	56.2%	2.45	47.0%	1.59	13.5%	1.95	27.1%	2.46	48.3%	2.15	31.8%
2.58	56.8%	2.57	52.1%	2.46	49.6%	1.66	17.4%	1.83	22.9%	2.43	46.7%	2.12	36.7%
2.52	51.4%	2.45	49.1%	2.41	46.8%	1.68	14.8%	1.70	16.6%	2.38	44.1%	2.00	26.5%
2.64	58.2%	2.84	66.7%	2.54	52.3%	1.70	17.2%	1.97	28.9%	2.41	46.4%	1.86	21.2%
2.55	54.1%	2.71	60.9%	2.44	47.5%	1.64	15.2%	1.88	24.7%	2.42	47.6%	1.85	21.4%
2.55	54.1%	2.67	59.4%	2.44	46.7%	1.67	15.7%	1.80	21.2%	2.39	46.1%	1.85	22.1%
2.53	53.5%	2.53	52.6%	2.42	47.0%	1.65	15.5%	1.74	20.2%	2.35	44.4%	1.85	22.7%
2.58	55.3%	2.70	60.4%	2.47	48.6%	1.65	15.6%	1.82	23.1%	2.39	46.3%	1.81	20.0%
2.57	55.4%	2.78	64.6%	2.41	46.5%	1.68	16.4%	1.85	23.8%	2.28	40.2%	1.84	21.2%
2.54	54.3%	2.70	60.1%	2.42	47.7%	1.63	14.0%	1.85	24.1%	2.34	43.1%	1.81	19.9%
2.49	50.3%	2.63	55.9%	2.39	44.7%	1.66	15.3%	1.89	25.4%	2.37	45.0%	1.89	25.1%
2.56	55.0%	2.61	56.9%	2.46	48.8%	1.68	16.6%	1.85	23.2%	2.42	47.4%	1.91	24.4%

<sup>2</sup> Statistical significance not reported for this item

Source: National Center for Education Statistics, 2003-04 Schools and Staffing Survey

**Table 11: Job-embedded Professional Development Activities and Supports (by state)**

	Percent of teachers who in the last twelve months:			
	Engaged in individual or collaborative research on a topic of interest to them professionally	Participated in regularly scheduled collaboration with other teachers on issues of instruction (besides administrative meetings)	Observed, or was observed by other teachers in their classroom (for at least 10 min.)	Acted as a coach or mentor to other teachers or staff in their school, or received coaching or mentoring
Nat'l	39.8%	70.4%	63.0%	45.7%
AL	40.5%	70.5%	59.5%	50.0%
AK	52.6%	68.3%	53.3%	37.3%
AZ	40.6%	68.9%	66.7%	49.8%
AR	35.6%	69.3%	53.2%	26.9%
CA	39.4%	79.4%	73.6%	51.0%
CO	45.9%	78.5%	68.8%	52.1%
CT	51.3%	73.9%	68.8%	49.2%
DE	32.0%	70.7%	64.7%	49.3%
DC	43.2%	73.3%	67.9%	50.5%
FL	36.4%	70.4%	63.6%	46.9%
GA	38.5%	74.4%	69.3%	45.1%
HI	42.1%	74.4%	65.6%	42.3%
ID	44.9%	74.8%	54.9%	46.8%
IL	43.3%	73.7%	63.0%	45.6%
IN	42.2%	74.8%	63.1%	39.5%
IA	42.4%	70.0%	48.1%	33.9%
KS	38.1%	68.5%	50.3%	35.4%
KY	36.1%	76.0%	71.3%	43.8%
LA	36.8%	70.7%	67.9%	37.8%
ME	48.8%	73.4%	65.2%	50.9%
MD	37.8%	66.8%	65.9%	53.4%
MA	47.5%	68.8%	66.0%	51.6%
MI	42.4%	66.2%	52.8%	47.0%
MN	40.8%	69.5%	59.0%	46.9%
MS	31.1%	66.1%	59.2%	45.9%
MO	43.7%	78.6%	65.5%	47.9%
MT	43.1%	62.4%	51.0%	40.2%
NE	35.1%	64.2%	52.8%	37.2%
NV	36.8%	74.4%	60.1%	48.5%
NH	54.5%	74.0%	67.1%	52.4%
NJ	43.3%	68.9%	62.6%	37.9%
NM	43.9%	70.9%	60.5%	52.1%
NY	44.6%	66.7%	63.4%	45.3%
NC	33.6%	72.2%	76.1%	52.5%
ND	38.9%	59.2%	52.9%	35.4%
OH	38.3%	66.5%	56.8%	37.6%
OK	27.3%	53.6%	55.9%	34.2%
OR	47.3%	70.4%	57.3%	45.5%
PA	40.6%	67.6%	58.1%	44.2%
RI	43.1%	67.6%	63.8%	35.6%
SC	37.3%	72.3%	74.5%	46.9%
SD	32.6%	59.1%	43.6%	36.4%
TN	35.4%	66.3%	59.0%	47.6%
TX	33.8%	68.4%	61.4%	49.7%
UT	47.8%	75.2%	65.5%	54.1%
VT	54.4%	73.7%	64.7%	45.0%
VA	32.7%	65.8%	64.5%	51.6%
WA	49.5%	77.9%	59.2%	41.6%
WV	27.0%	56.4%	46.3%	25.7%
WI	44.5%	66.8%	53.8%	42.6%
WY	46.7%	71.7%	55.6%	41.7%

p < 0.01 higher than nat'l avg.

p < 0.001 higher than nat'l avg.



**Table 12: Teacher Attitudes and School Climate  
(by State)**

Extent teachers agreed that: (1=Strongly Agree, 2=Somewhat Agree, 3=Somewhat Disagree, 4=Strongly Disagree)					
There is a great deal of cooperative effort among staff members		They are given the supports they need to teach students with special needs		They make a conscious effort to coordinate the content of their courses with that of other teachers	
Avg.	Somewhat or Strongly Agree <sup>2</sup>	Avg.	Somewhat or Strongly Agree <sup>2</sup>	Avg.	Somewhat or Strongly Agree <sup>2</sup>
3.20	17.0%	2.74	36.0%	3.22	13.6%
3.33	12.0%	2.85	31.9%	3.28	10.3%
3.12	20.5%	2.55	44.8%	3.08	19.1%
3.16	16.7%	2.70	38.0%	3.22	12.1%
3.26	14.2%	2.93	27.8%	3.28	11.9%
3.16	19.5%	2.61	43.3%	3.30	12.3%
3.16	19.2%	2.72	37.2%	3.28	10.6%
3.17	16.9%	2.72	37.1%	3.24	13.0%
3.23	14.6%	2.66	40.4%	3.29	13.2%
3.02	24.3%	2.58	44.9%	3.09	18.4%
3.19	18.9%	2.79	31.8%	3.16	16.6%
3.23	14.0%	2.98	25.7%	3.27	11.7%
2.99	23.7%	2.51	47.1%	3.17	12.7%
3.17	17.9%	2.62	40.9%	3.26	13.3%
3.30	14.6%	2.80	33.4%	3.24	14.3%
3.18	17.3%	2.65	38.6%	3.15	14.8%
3.26	14.1%	2.77	33.6%	3.18	14.8%
3.17	17.2%	2.83	30.5%	3.21	15.8%
3.25	15.4%	2.82	33.8%	3.31	10.4%
3.22	17.1%	2.90	29.7%	3.26	12.8%
3.27	15.0%	2.90	27.7%	3.16	14.8%
3.13	19.0%	2.52	47.0%	3.18	17.0%
3.17	19.3%	2.69	39.5%	3.28	11.6%
3.17	18.7%	2.58	43.2%	3.13	15.9%
3.18	16.2%	2.70	37.0%	3.16	14.3%
3.29	13.7%	2.91	28.9%	3.28	11.1%
3.29	13.9%	2.94	26.2%	3.30	11.0%
3.11	20.5%	2.85	29.6%	3.13	15.7%
3.22	15.7%	2.87	31.2%	3.09	16.1%
3.15	18.3%	2.64	41.7%	3.13	15.4%
3.13	19.3%	2.70	35.8%	3.27	12.5%
3.29	14.2%	2.72	38.4%	3.24	13.2%
3.06	21.2%	2.67	40.2%	3.13	15.2%
3.16	15.8%	2.71	37.5%	3.21	13.2%
3.13	18.7%	2.75	33.4%	3.26	11.4%
3.18	15.7%	3.03	22.6%	3.17	13.1%
3.12	19.8%	2.68	38.9%	3.09	19.0%
3.24	15.9%	2.83	31.3%	3.12	17.2%
3.25	17.1%	2.51	46.5%	3.23	12.2%
3.25	16.0%	2.68	39.3%	3.14	17.3%
3.20	19.2%	2.72	38.0%	3.21	15.7%
3.33	10.9%	2.84	30.3%	3.21	13.9%
3.24	14.9%	2.97	23.2%	3.10	17.5%
3.18	16.4%	2.67	40.7%	3.20	16.8%
3.17	18.2%	2.87	31.4%	3.31	10.6%
3.35	11.4%	2.64	42.2%	3.22	14.8%
3.17	16.0%	2.93	25.6%	3.26	12.9%
3.27	14.5%	2.74	35.8%	3.31	10.7%
3.18	17.6%	2.46	48.6%	3.20	13.4%
3.28	14.1%	2.81	32.8%	3.08	18.9%
3.10	20.6%	2.76	34.8%	3.13	15.6%
3.19	17.3%	2.99	25.1%	3.14	15.6%

<sup>2</sup> Statistical significance not reported for this item

Source: National Center for Education Statistics, 2003-04 Schools and Staffing Survey

**Table 13: Job-embedded Professional Development Activities and Supports  
(by school context variables)**

		Percent of teachers who in the last twelve months:			
		Engaged in individual or collaborative research on a topic of interest to them professionally	Participated in regularly scheduled collaboration with other teachers on issues of instruction (besides administrative meetings)	Observed, or was observed by other teachers in their classroom (for at least 10 min.)	Acted as a coach or mentor to other teachers or staff in their school, or received coaching or mentoring
<b>Nat'l</b>		<b>39.8%</b>	<b>70.4%</b>	<b>63.0%</b>	<b>45.7%</b>
<b>School Level</b>	Elem.	39.7%	74.6%	63.9%	46.1%
	Sec	40.7%	63.4%	62.3%	45.8%
<b>Urbanicity</b>	City	39.5%	72.9%	68.2%	47.9%
	Urban Fringe	41.7%	71.1%	62.8%	46.4%
	Small Town/Rural	35.3%	64.7%	56.1%	40.7%
<b>% Minority Enrollment</b>	<10.5%	42.8%	72.0%	63.4%	40.5%
	10.5-23.0%	43.1%	73.3%	58.0%	42.1%
	23.0-44.6%	37.1%	76.2%	66.4%	49.2%
	44.6-77.0%	41.1%	77.6%	74.5%	55.1%
	>77.0%	43.1%	78.7%	75.4%	52.4%
<b>% Free/Reduced Lunch</b>	< 17.3%	45.2%	71.3%	61.3%	44.4%
	17.3-34.3%	40.8%	68.9%	61.0%	46.3%
	34.4-53.8%	36.8%	69.0%	61.3%	44.4%
	> 53.8%	37.6%	71.8%	66.8%	47.3%
<b>% LEP</b>	0%	37.6%	69.1%	59.5%	44.2%
	<2.5%	43.0%	68.5%	65.1%	48.4%
	2.5-5%	42.0%	72.4%	61.7%	46.2%
	5-10%	44.2%	71.7%	64.8%	47.7%
	>10%	40.8%	72.0%	67.0%	46.7%

p < 0.01 higher than nat'l avg.

p < 0.001 higher than nat'l avg.

p < 0.01 lower than nat'l avg.

p < 0.001 lower than nat'l avg.

**Table 14: Teacher Attitudes and School Climate  
(by School Context Variables)**

Extent teachers agreed that: (1=Strongly Agree, 2=Somewhat Agree, 3=Somewhat Disagree, 4=Strongly Disagree)					
There is a great deal of cooperative effort among staff members		They are given the supports they need to teach students with special needs		They make a conscious effort to coordinate the content of their courses with that of other teachers	
Avg.	Somewhat or Strongly Agree <sup>2</sup>	Avg.	Somewhat or Strongly Agree <sup>2</sup>	Avg.	Somewhat or Strongly Agree <sup>2</sup>
<b>3.20</b>	<b>17.0%</b>	<b>2.74</b>	<b>36.0%</b>	<b>3.22</b>	<b>13.6%</b>
3.26	15.0%	2.74	36.5%	3.30	10.9%
3.07	21.2%	2.72	36.7%	3.08	18.9%
3.13	19.5%	2.60	42.8%	3.22	13.7%
3.24	15.5%	2.78	34.3%	3.24	13.2%
3.20	17.2%	2.85	30.5%	3.18	14.9%
3.30	14.5%	2.96	27.7%	3.31	11.1%
3.24	14.7%	2.68	38.0%	3.31	10.6%
3.20	17.6%	2.71	37.3%	3.29	10.2%
3.19	16.7%	2.63	42.3%	3.23	13.5%
3.09	22.0%	2.60	45.1%	3.26	13.6%
3.26	15.0%	2.82	31.9%	3.24	13.5%
3.20	16.5%	2.75	35.1%	3.22	14.1%
3.17	13.8%	2.74	36.0%	3.20	14.2%
3.18	14.8%	2.69	39.6%	3.23	13.0%
3.21	16.4%	2.78	33.7%	3.20	14.3%
3.10	20.0%	2.64	40.9%	3.15	15.9%
3.18	17.9%	2.60	43.4%	3.17	14.9%
3.18	17.3%	2.57	43.4%	3.24	13.6%
3.21	16.8%	2.77	35.4%	3.27	12.1%

<sup>2</sup> Statistical significance not reported for this item

**Table 15. Differences in Participation in Formal Professional Development Activities by School Grade Level (Elementary vs. Secondary)**

Types of formal professional development activities	Mean Diff (Elem - Sec)	Std Error	t	P>  t
1) University courses related to teaching	0.018*	0.0080	2.19	0.031
2) Observational visits to other schools	0.033***	0.0070	4.73	0.000
3) Workshops, conferences, or training sessions (not a presenter)	-0.008	0.0069	-1.14	0.258
4) Presenter at workshops, conferences, or training sessions	0.045***	0.0047	9.57	0.000

\*Difference is significant (p<.05)

\*\*\*Difference is significant (p<.001)

**Table 16. Differences in Participation in Professional Development on 4 Topics by School Grade Level (Elementary vs. Secondary)**

Topic of professional development activities	Mean Diff (Elem - Sec)	Std Error	t	P>  t
1) the content of the subject(s) they teach	0.119***	0.0056	21.25	0.000
2) uses of computers for instruction	-0.001	0.0081	-0.14	0.889
3) reading instruction	0.304***	0.0098	30.95	0.000
4) student discipline and management in the classroom	0.035***	0.0088	4.02	0.000

\*\*\*Difference is significant (p<.001)

**Table 17. Differences in Reported Supports for Participating in Professional Development Activities by School Grade Level (Elementary vs. Secondary)**

Types of support for professional development participation	Mean Diff (Elem - Sec)	Std Error	t	P>  t
a. Release time from teaching (i.e., your regular teaching responsibilities were temporarily assigned to someone else)	0.068***	0.0087	7.76	0.000
b. Scheduled time in the contract year for professional development	0.042***	0.0077	5.41	0.000
c. Stipend for professional development activities that took place outside regular work hours	0.105***	0.0090	11.64	0.000
d. Full or partial reimbursement of college tuition	0.000	0.0054	-0.06	0.950
e. Reimbursement for conference or workshop fees	-0.029**	0.0080	-3.61	0.001
f. Reimbursement for travel and/or daily expenses*	-0.084***	0.0077	-10.90	0.000

\*\*Difference is significant (p<.01)

\*\*\*Difference is significant (p<.001)

**Table 18. Differences in Participation in Formal Professional Development Activities by School Urbanicity (1-Large town/central “urban”, 2-Urban fringe “suburban”, 3-Small town/rural)**

Types of formal professional development activities	Urbanicity (A)	Urbanicity (B)	Mean Diff (A-B)	Std Error	t	P>  t
1) University courses related to teaching	1) Urban	2) Suburban	0.018	0.0116	1.57	0.121
	1) Urban	3) Rural	0.021	0.0113	1.83	0.071
	2) Suburban	3) Rural	0.002	0.0088	0.28	0.778
2) Observational visits to other schools	1) Urban	2) Suburban	0.022*	0.0084	2.64	0.010
	1) Urban	3) Rural	0.025*	0.0106	2.35	0.021
	2) Suburban	3) Rural	0.003	0.0087	0.30	0.761
3) Workshops, conferences, or training sessions (not a presenter)	1) Urban	2) Suburban	0.012*	0.0059	2.04	0.044
	1) Urban	3) Rural	0.002	0.0064	0.26	0.796
	2) Suburban	3) Rural	-0.010	0.0054	-1.93	0.057
4) Presenter at workshops, conferences, or training sessions	1) Urban	2) Suburban	0.029**	0.0086	3.42	0.001
	1) Urban	3) Rural	0.071***	0.0097	7.34	0.000
	2) Suburban	3) Rural	0.042***	0.0083	5.06	0.000

\* Difference is significant (p<.05) \*\*Difference is significant (p<.01) \*\*\*Difference is significant (p<.001)

**Table 19. Differences in Participation in Professional Development on 4 Topics by School Urbanicity (1-Large town/central “urban”, 2-Urban fringe “suburban”, 3-Small town/rural)**

Topic of professional development activities	Urbanicity (A)	Urbanicity (B)	Mean Diff (A-B)	Std Error	t	P>  t
1) the content of the subject(s) they teach	1) Urban	2) Suburban	0.029***	0.0061	4.78	0.000
	1) Urban	3) Rural	0.070***	0.0082	8.51	0.000
	2) Suburban	3) Rural	0.041***	0.0076	5.36	0.000
2) uses of computers for instruction	1) Urban	2) Suburban	-0.028*	0.0124	-2.22	0.029
	1) Urban	3) Rural	-0.024	0.0153	-1.57	0.120
	2) Suburban	3) Rural	0.004	0.0118	0.30	0.763
3) reading instruction	1) Urban	2) Suburban	0.105***	0.0117	9.01	0.000
	1) Urban	3) Rural	0.153***	0.0143	10.68	0.000
	2) Suburban	3) Rural	0.048***	0.0123	3.86	0.000
4) student discipline and management in the classroom	1) Urban	2) Suburban	0.039**	0.0117	3.35	0.001
	1) Urban	3) Rural	0.030*	0.0133	2.23	0.028
	2) Suburban	3) Rural	-0.010	0.0097	-0.99	0.325

\* Difference is significant (p<.05) \*\*Difference is significant (p<.01) \*\*\*Difference is significant (p<.001)

**Table 20. Differences in Reported Supports for Participating in Professional Development Activities by School Urbanicity  
(1-Large town/central "urban", 2-Urban fringe "suburban", 3-Small town/rural)**

<b>Types of support for professional development participation</b>	<b>Urbanicity (A)</b>	<b>Urbanicity (B)</b>	<b>Mean Diff (A-B)</b>	<b>Std Error</b>	<b>t</b>	<b>P&gt;  t  </b>
a. Release time from teaching (i.e., your regular teaching responsibilities were temporarily assigned to someone else)	1) Urban	2) Suburban	-0.032	0.0118	-2.69	0.009
	1) Urban	3) Rural	-0.061***	0.0136	-4.49	0.000
	2) Suburban	3) Rural	-0.029**	0.0100	-2.95	0.004
b. Scheduled time in the contract year for professional development	1) Urban	2) Suburban	-0.002	0.0095	-0.16	0.873
	1) Urban	3) Rural	-0.009	0.0098	-0.89	0.378
	2) Suburban	3) Rural	-0.007	0.0073	-0.98	0.330
c. Stipend for professional development activities that took place outside regular work hours	1) Urban	2) Suburban	0.057***	0.0127	4.54	0.000
	1) Urban	3) Rural	0.011	0.0137	0.77	0.445
	2) Suburban	3) Rural	-0.047***	0.0119	-3.94	0.000
d. Full or partial reimbursement of college tuition	1) Urban	2) Suburban	-0.052***	0.0077	-6.77	0.000
	1) Urban	3) Rural	-0.060***	0.0078	-7.65	0.000
	2) Suburban	3) Rural	-0.007	0.0076	-0.98	0.329
e. Reimbursement for conference or workshop fees	1) Urban	2) Suburban	-0.125***	0.0104	-12.07	0.000
	1) Urban	3) Rural	-0.217***	0.0120	-18.06	0.000
	2) Suburban	3) Rural	-0.092***	0.0117	-7.85	0.000
f. Reimbursement for travel and/or daily expenses	1) Urban	2) Suburban	-0.072***	0.0090	-8.01	0.000
	1) Urban	3) Rural	-0.297***	0.0103	-28.68	0.000
	2) Suburban	3) Rural	-0.225***	0.0087	-25.95	0.000

\* Difference is significant (p<.05)    \*\*Difference is significant (p<.01)    \*\*\*Difference is significant (p<.001)

**Table 21. Differences in Participation in Formal Professional Development Activities by School Minority Enrollment**

Types of formal professional development activities	Percent Minority Enrollment (A)	Percent Minority Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
1) University courses related to teaching	1) < 10.5%	2) 10.5-23.0%	-0.121***	0.0316	-3.83	0.000
	1) < 10.5%	3) 23.0-44.6%	-0.136***	0.0253	-5.39	0.000
	1) < 10.5%	4) 44.6-77.0%	-0.171***	0.0308	-5.54	0.000
	1) < 10.5%	5) >77%	-0.198***	0.0332	-5.96	0.000
	2) 10.5-23.0%	3) 23.0-44.6%	-0.015	0.0325	-0.47	0.639
	2) 10.5-23.0%	4) 44.6-77.0%	-0.050	0.0354	-1.40	0.165
	2) 10.5-23.0%	5) >77%	-0.077*	0.0369	-2.08	0.040
	3) 23.0-44.6%	4) 44.6-77.0%	-0.034	0.0301	-1.14	0.258
	3) 23.0-44.6%	5) >77%	-0.062	0.0372	-1.65	0.102
	4) 44.6-77.0%	5) >77%	-0.027	0.0375	-0.73	0.467
2) Observational visits to other schools	1) < 10.5%	2) 10.5-23.0%	-0.068**	0.0253	-2.68	0.009
	1) < 10.5%	3) 23.0-44.6%	-0.117***	0.0303	-3.85	0.000
	1) < 10.5%	4) 44.6-77.0%	-0.104***	0.0265	-3.92	0.000
	1) < 10.5%	5) >77%	-0.134***	0.0269	-4.97	0.000
	2) 10.5-23.0%	3) 23.0-44.6%	-0.049	0.0315	-1.54	0.127
	2) 10.5-23.0%	4) 44.6-77.0%	-0.036	0.0299	-1.21	0.229
	2) 10.5-23.0%	5) >77%	-0.066	0.0332	-1.98	0.051
	3) 23.0-44.6%	4) 44.6-77.0%	0.012	0.0310	0.40	0.689
	3) 23.0-44.6%	5) >77%	-0.017	0.0355	-0.48	0.633
	4) 44.6-77.0%	5) >77%	-0.029	0.0289	-1.02	0.311
3) Workshops, conferences, or training sessions (not a presenter)	1) < 10.5%	2) 10.5-23.0%	0.012	0.0280	0.42	0.678
	1) < 10.5%	3) 23.0-44.6%	-0.038	0.0319	-1.18	0.243
	1) < 10.5%	4) 44.6-77.0%	-0.027	0.0298	-0.92	0.362
	1) < 10.5%	5) >77%	-0.020	0.0269	-0.75	0.458
	2) 10.5-23.0%	3) 23.0-44.6%	-0.049	0.0373	-1.32	0.191
	2) 10.5-23.0%	4) 44.6-77.0%	-0.032	0.0321	-0.99	0.326
	2) 10.5-23.0%	5) >77%	-0.019	0.0273	-0.69	0.489
	3) 23.0-44.6%	4) 44.6-77.0%	0.010	0.0347	0.30	0.768
	3) 23.0-44.6%	5) >77%	0.018	0.0338	0.52	0.606
	4) 44.6-77.0%	5) >77%	0.007	0.0321	0.23	0.822
4) Presenter at workshops, conferences, or training sessions	1) < 10.5%	2) 10.5-23.0%	0.037	0.0211	1.75	0.084
	1) < 10.5%	3) 23.0-44.6%	0.045*	0.0211	2.12	0.037
	1) < 10.5%	4) 44.6-77.0%	0.040*	0.0186	2.17	0.032
	1) < 10.5%	5) >77%	0.006	0.0154	0.42	0.677
	2) 10.5-23.0%	3) 23.0-44.6%	0.008	0.0243	0.32	0.750
	2) 10.5-23.0%	4) 44.6-77.0%	0.003	0.0235	0.15	0.884
	2) 10.5-23.0%	5) >77%	-0.030	0.0201	-1.52	0.133
	3) 23.0-44.6%	4) 44.6-77.0%	-0.004	0.0240	-0.18	0.858
	3) 23.0-44.6%	5) >77%	-0.038	0.0196	-1.95	0.055
	4) 44.6-77.0%	5) >77%	-0.034	0.0178	-1.91	0.059

\* Difference is significant (p<.05) \*\*Difference is significant (p<.01) \*\*\*Difference is significant (p<.001)

Source: National Center for Education Statistics, 2003-04 Schools and Staffing Survey

**Table 22. Differences in Participation in Professional Development on 4 Topics by School Minority Enrollment**

Topic of professional development activities	Percent Minority Enrollment (A)	Percent Minority Enrollment (B)	Mean Diff (A-B)	Std Error	t	P> t
1) the content of the subject(s) they teach	1) < 10.5%	2) 10.5-23.0%	0.028	0.0283	1.01	0.317
	1) < 10.5%	3) 23.0-44.6%	0.061**	0.0200	3.02	0.003
	1) < 10.5%	4) 44.6-77.0%	0.023	0.0237	0.99	0.326
	1) < 10.5%	5) >77%	-0.057**	0.0177	-3.19	0.002
	2) 10.5-23.0%	3) 23.0-44.6%	0.032	0.0303	1.06	0.293
	2) 10.5-23.0%	4) 44.6-77.0%	-0.005	0.0272	-0.19	0.853
	2) 10.5-23.0%	5) >77%	-0.085**	0.0258	-3.30	0.001
	3) 23.0-44.6%	4) 44.6-77.0%	-0.037	0.0247	-1.50	0.137
	3) 23.0-44.6%	5) >77%	-0.117***	0.0190	-6.16	0.000
2) uses of computers for instruction	4) 44.6-77.0%	5) >77%	-0.080**	0.0229	-3.49	0.001
	1) < 10.5%	2) 10.5-23.0%	0.108**	0.0355	3.06	0.003
	1) < 10.5%	3) 23.0-44.6%	0.167***	0.0335	4.97	0.000
	1) < 10.5%	4) 44.6-77.0%	0.203***	0.0368	5.51	0.000
	1) < 10.5%	5) >77%	0.117**	0.0354	3.30	0.001
	2) 10.5-23.0%	3) 23.0-44.6%	0.058	0.0367	1.58	0.117
	2) 10.5-23.0%	4) 44.6-77.0%	0.094*	0.0428	2.20	0.030
	2) 10.5-23.0%	5) >77%	0.009	0.0403	0.21	0.833
	3) 23.0-44.6%	4) 44.6-77.0%	0.036	0.0401	0.90	0.372
3) reading instruction	3) 23.0-44.6%	5) >77%	-0.050	0.0388	-1.28	0.205
	4) 44.6-77.0%	5) >77%	-0.086*	0.0392	-2.19	0.031
	1) < 10.5%	2) 10.5-23.0%	-0.027	0.0460	-0.60	0.553
	1) < 10.5%	3) 23.0-44.6%	-0.071*	0.0353	-2.00	0.048
	1) < 10.5%	4) 44.6-77.0%	-0.099	0.0401	-2.48	0.015
	1) < 10.5%	5) >77%	-0.200***	0.0348	-5.75	0.000
	2) 10.5-23.0%	3) 23.0-44.6%	-0.043	0.0413	-1.05	0.297
	2) 10.5-23.0%	4) 44.6-77.0%	-0.072	0.0461	-1.56	0.122
	2) 10.5-23.0%	5) >77%	-0.173***	0.0379	-4.56	0.000
4) student discipline and management in the classroom	3) 23.0-44.6%	4) 44.6-77.0%	-0.029	0.0439	-0.65	0.515
	3) 23.0-44.6%	5) >77%	-0.130***	0.0349	-3.71	0.000
	4) 44.6-77.0%	5) >77%	-0.101**	0.0286	-3.53	0.001
	1) < 10.5%	2) 10.5-23.0%	-0.016	0.0327	-0.49	0.623
	1) < 10.5%	3) 23.0-44.6%	-0.036	0.0236	-1.53	0.130
	1) < 10.5%	4) 44.6-77.0%	-0.065*	0.0282	-2.29	0.024
	1) < 10.5%	5) >77%	-0.117**	0.0348	-3.37	0.001
	2) 10.5-23.0%	3) 23.0-44.6%	-0.020	0.0329	-0.61	0.545
	2) 10.5-23.0%	4) 44.6-77.0%	-0.049	0.0354	-1.37	0.174
	2) 10.5-23.0%	5) >77%	-0.101*	0.0388	-2.61	0.011
	3) 23.0-44.6%	4) 44.6-77.0%	-0.029	0.0300	-0.95	0.343
	3) 23.0-44.6%	5) >77%	-0.081*	0.0338	-2.41	0.018
	4) 44.6-77.0%	5) >77%	-0.053	0.0356	-1.48	0.143

\* Difference is significant (p<.05) \*\*Difference is significant (p<.01) \*\*\*Difference is significant (p<.001)



**Table 23. Differences in Reported Supports for Participating in Professional Development Activities by School Minority Enrollment**

Types of support for professional development participation	Percent Minority Enrollment (A)	Percent Minority Enrollment (B)	Mean Diff (A-B)	Std Error	t	P> t
a. Release time from teaching (i.e., your regular teaching responsibilities were temporarily assigned to someone else)	1) < 10.5%	2) 10.5-23.0%	0.030	0.0382	0.78	0.438
	1) < 10.5%	3) 23.0-44.6%	0.068*	0.0335	2.02	0.047
	1) < 10.5%	4) 44.6-77.0%	0.022	0.0346	0.62	0.536
	1) < 10.5%	5) >77%	-0.038	0.0354	-1.08	0.284
	2) 10.5-23.0%	3) 23.0-44.6%	0.038	0.0401	0.94	0.349
	2) 10.5-23.0%	4) 44.6-77.0%	-0.008	0.0402	-0.21	0.837
	2) 10.5-23.0%	5) >77%	-0.068	0.0367	-1.85	0.068
	3) 23.0-44.6%	4) 44.6-77.0%	-0.046	0.0326	-1.41	0.162
	3) 23.0-44.6%	5) >77%	-0.106**	0.0367	-2.88	0.005
b. Scheduled time in the contract year for professional development	4) 44.6-77.0%	5) >77%	-0.060	0.0352	-1.69	0.094
	1) < 10.5%	2) 10.5-23.0%	0.070	0.0357	1.95	0.054
	1) < 10.5%	3) 23.0-44.6%	0.085*	0.0329	2.58	0.012
	1) < 10.5%	4) 44.6-77.0%	0.106**	0.0327	3.25	0.002
	1) < 10.5%	5) >77%	0.028	0.0260	1.08	0.282
	2) 10.5-23.0%	3) 23.0-44.6%	0.015	0.0374	0.41	0.683
	2) 10.5-23.0%	4) 44.6-77.0%	0.037	0.0350	1.04	0.299
	2) 10.5-23.0%	5) >77%	-0.042	0.0372	-1.12	0.267
	3) 23.0-44.6%	4) 44.6-77.0%	0.021	0.0349	0.61	0.544
c. Stipend for professional development activities that took place outside regular work hours	3) 23.0-44.6%	5) >77%	-0.057	0.0361	-1.57	0.119
	4) 44.6-77.0%	5) >77%	-0.078*	0.0331	-2.36	0.021
	1) < 10.5%	2) 10.5-23.0%	-0.003	0.0367	-0.09	0.931
	1) < 10.5%	3) 23.0-44.6%	-0.152***	0.0353	-4.32	0.000
	1) < 10.5%	4) 44.6-77.0%	-0.147***	0.0358	-4.11	0.000
	1) < 10.5%	5) >77%	-0.257***	0.0384	-6.70	0.000
	2) 10.5-23.0%	3) 23.0-44.6%	-0.149***	0.0403	-3.71	0.000
	2) 10.5-23.0%	4) 44.6-77.0%	-0.144***	0.0364	-3.95	0.000
	2) 10.5-23.0%	5) >77%	-0.254***	0.0319	-7.96	0.000
d. Full or partial reimbursement of college tuition	3) 23.0-44.6%	4) 44.6-77.0%	0.005	0.0414	0.13	0.900
	3) 23.0-44.6%	5) >77%	-0.105*	0.0435	-2.41	0.018
	4) 44.6-77.0%	5) >77%	-0.110**	0.0363	-3.03	0.003
	1) < 10.5%	2) 10.5-23.0%	0.018	0.0151	1.17	0.245
	1) < 10.5%	3) 23.0-44.6%	0.009	0.0160	0.57	0.571
	1) < 10.5%	4) 44.6-77.0%	0.020	0.0144	1.37	0.175
	1) < 10.5%	5) >77%	-0.029	0.0209	-1.40	0.166
	2) 10.5-23.0%	3) 23.0-44.6%	-0.009	0.0141	-0.61	0.544
	2) 10.5-23.0%	4) 44.6-77.0%	0.002	0.0127	0.16	0.875
2) 10.5-23.0%	5) >77%	-0.047*	0.0195	-2.40	0.018	
3) 23.0-44.6%	4) 44.6-77.0%	0.011	0.0153	0.69	0.491	
3) 23.0-44.6%	5) >77%	-0.038	0.0209	-1.83	0.070	
4) 44.6-77.0%	5) >77%	-0.049*	0.0187	-2.61	0.011	

*Table continues on next page*

Source: National Center for Education Statistics, 2003-04 Schools and Staffing Survey

**Table 23. Differences in Reported Supports for Participating in Professional Development Activities by School Minority Enrollment (continued)**

Types of support for professional development participation	Percent Minority Enrollment (A)	Percent Minority Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
e. Reimbursement for conference or workshop fees	1) < 10.5%	2) 10.5-23.0%	0.073*	0.0330	2.23	0.029
	1) < 10.5%	3) 23.0-44.6%	0.099**	0.0334	2.95	0.004
	1) < 10.5%	4) 44.6-77.0%	0.171***	0.0295	5.79	0.000
	1) < 10.5%	5) >77%	0.176***	0.0304	5.79	0.000
	2) 10.5-23.0%	3) 23.0-44.6%	0.025	0.0368	0.69	0.492
	2) 10.5-23.0%	4) 44.6-77.0%	0.098**	0.0350	2.79	0.007
	2) 10.5-23.0%	5) >77%	0.102**	0.0346	2.95	0.004
	3) 23.0-44.6%	4) 44.6-77.0%	0.072*	0.0327	2.20	0.030
	3) 23.0-44.6%	5) >77%	0.077*	0.0316	2.44	0.017
4) 44.6-77.0%	5) >77%	0.005	0.0302	0.16	0.874	
f. Reimbursement for travel and/or daily expenses	1) < 10.5%	2) 10.5-23.0%	0.114**	0.0319	3.57	0.001
	1) < 10.5%	3) 23.0-44.6%	0.046	0.0326	1.41	0.161
	1) < 10.5%	4) 44.6-77.0%	0.099**	0.0323	3.05	0.003
	1) < 10.5%	5) >77%	0.102***	0.0281	3.63	0.000
	2) 10.5-23.0%	3) 23.0-44.6%	-0.068*	0.0325	-2.08	0.040
	2) 10.5-23.0%	4) 44.6-77.0%	-0.015	0.0353	-0.43	0.669
	2) 10.5-23.0%	5) >77%	-0.012	0.0324	-0.36	0.719
	3) 23.0-44.6%	4) 44.6-77.0%	0.053	0.0371	1.42	0.160
	3) 23.0-44.6%	5) >77%	0.056	0.0333	1.68	0.096
4) 44.6-77.0%	5) >77%	0.003	0.0361	0.10	0.924	

\* Difference is significant (p<.05) \*\*Difference is significant (p<.01) \*\*\*Difference is significant (p<.001)

**Table 24. Differences in Participation in Formal Professional Development Activities by School Poverty (Percent of Students Enrolled in the Free and Reduced Lunch Program - FRL)**

Types of formal professional development activities	Percent FRL Enrollment (A)	Percent FRL Enrollment (B)	Mean Diff (A-B)	Std Error	T	P>  t
1) University courses related to teaching	1) <17.31%	2) 17.32-34.34%	0.004	0.0121	0.36	0.716
	1) <17.31%	3) 34.35-53.84%	0.044***	0.0122	3.62	0.000
	1) <17.31%	4) > 53.85%	0.015	0.0142	1.09	0.281
	2) 17.32-34.34%	3) 34.35-53.84%	0.040**	0.0112	3.54	0.001
	2) 17.32-34.34%	4) > 53.85%	0.011	0.0122	0.91	0.368
	3) 34.35-53.84%	4) > 53.85%	-0.029*	0.0128	-2.24	0.028
2) Observational visits to other schools	1) <17.31%	2) 17.32-34.34%	-0.016	0.0111	-1.41	0.162
	1) <17.31%	3) 34.35-53.84%	-0.005	0.0090	-0.52	0.606
	1) <17.31%	4) > 53.85%	-0.029**	0.0103	-2.84	0.006
	2) 17.32-34.34%	3) 34.35-53.84%	0.011	0.0107	1.03	0.306
	2) 17.32-34.34%	4) > 53.85%	-0.014	0.0112	-1.21	0.230
	3) 34.35-53.84%	4) > 53.85%	-0.025*	0.0107	-2.30	0.024
3) Workshops, conferences, or training sessions (not a presenter)	1) <17.31%	2) 17.32-34.34%	0.002	0.0075	0.24	0.808
	1) <17.31%	3) 34.35-53.84%	-0.007	0.0067	-1.06	0.290
	1) <17.31%	4) > 53.85%	-0.017**	0.0055	-3.17	0.002
	2) 17.32-34.34%	3) 34.35-53.84%	-0.009	0.0074	-1.21	0.229
	2) 17.32-34.34%	4) > 53.85%	-0.019**	0.0064	-3.00	0.004
	3) 34.35-53.84%	4) > 53.85%	-0.010	0.0058	-1.77	0.080
4) Presenter at workshops, conferences, or training sessions	1) <17.31%	2) 17.32-34.34%	0.025*	0.0120	2.04	0.044
	1) <17.31%	3) 34.35-53.84%	0.024*	0.0117	2.06	0.042
	1) <17.31%	4) > 53.85%	0.002	0.0126	0.18	0.859
	2) 17.32-34.34%	3) 34.35-53.84%	0.000	0.0093	-0.04	0.964
	2) 17.32-34.34%	4) > 53.85%	-0.022*	0.0105	-2.11	0.038
	3) 34.35-53.84%	4) > 53.85%	-0.022*	0.0098	-2.22	0.029

\* Difference is significant (p<.05)    \*\*Difference is significant (p<.01)    \*\*\*Difference is significant (p<.001)

**Table 25. Differences in Participation in Professional Development on 4 Topics by School Poverty (Percent of Students Enrolled in the Free and Reduced Lunch Program - FRL)**

Topic of professional development activities	Percent FRL Enrollment (A)	Percent FRL Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
1) the content of the subject(s) they teach	1) <17.31%	2) 17.32-34.34%	0.000	0.0088	0.04	0.965
	1) <17.31%	3) 34.35-53.84%	-0.005	0.0086	-0.59	0.558
	1) <17.31%	4) > 53.85%	-0.035**	0.0099	-3.53	0.001
	2) 17.32-34.34%	3) 34.35-53.84%	-0.005	0.0082	-0.66	0.509
	2) 17.32-34.34%	4) > 53.85%	-0.035***	0.0073	-4.83	0.000
	3) 34.35-53.84%	4) > 53.85%	-0.030***	0.0081	-3.69	0.000
2) uses of computers for instruction	1) <17.31%	2) 17.32-34.34%	0.011	0.0130	0.82	0.414
	1) <17.31%	3) 34.35-53.84%	0.025	0.0128	1.94	0.056
	1) <17.31%	4) > 53.85%	0.025	0.0133	1.89	0.062
	2) 17.32-34.34%	3) 34.35-53.84%	0.014	0.0134	1.06	0.292
	2) 17.32-34.34%	4) > 53.85%	0.014	0.0123	1.17	0.243
	3) 34.35-53.84%	4) > 53.85%	0.000	0.0152	0.02	0.986
3) reading instruction	1) <17.31%	2) 17.32-34.34%	-0.031*	0.0145	-2.13	0.036
	1) <17.31%	3) 34.35-53.84%	-0.077***	0.0137	-5.64	0.000
	1) <17.31%	4) > 53.85%	-0.164***	0.0125	-13.18	0.000
	2) 17.32-34.34%	3) 34.35-53.84%	-0.046**	0.0162	-2.86	0.005
	2) 17.32-34.34%	4) > 53.85%	-0.133***	0.0143	-9.34	0.000
	3) 34.35-53.84%	4) > 53.85%	-0.087***	0.0118	-7.37	0.000
4) student discipline and management in the classroom	1) <17.31%	2) 17.32-34.34%	-0.034*	0.0153	-2.24	0.028
	1) <17.31%	3) 34.35-53.84%	-0.075***	0.0143	-5.24	0.000
	1) <17.31%	4) > 53.85%	-0.099***	0.0152	-6.51	0.000
	2) 17.32-34.34%	3) 34.35-53.84%	-0.041**	0.0141	-2.89	0.005
	2) 17.32-34.34%	4) > 53.85%	-0.065***	0.0128	-5.08	0.000
	3) 34.35-53.84%	4) > 53.85%	-0.024	0.0131	-1.84	0.069

\* Difference is significant (p<.05) \*\*Difference is significant (p<.01) \*\*\*Difference is significant (p<.001)

**Table 26. Differences in Reported Supports for Participating in Professional Development Activities by School Poverty (Percent of Students Enrolled in the Free and Reduced Lunch Program)**

Types of support for professional development participation	Percent FRL Enrollment (A)	Percent FRL Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
a. Release time from teaching (i.e., your regular teaching responsibilities were temporarily assigned to someone else)	1) <17.31%	2) 17.32-34.34%	0.021	0.0135	1.59	0.117
	1) <17.31%	3) 34.35-53.84%	0.024	0.0141	1.73	0.088
	1) <17.31%	4) > 53.85%	0.016	0.0129	1.22	0.226
	2) 17.32-34.34%	3) 34.35-53.84%	0.003	0.0124	0.24	0.813
	2) 17.32-34.34%	4) > 53.85%	-0.006	0.0147	-0.38	0.705
	3) 34.35-53.84%	4) > 53.85%	-0.009	0.0128	-0.67	0.507
b. Scheduled time in the contract year for professional development	1) <17.31%	2) 17.32-34.34%	0.002	0.0096	0.16	0.870
	1) <17.31%	3) 34.35-53.84%	0.005	0.0110	0.45	0.652
	1) <17.31%	4) > 53.85%	0.008	0.0095	0.84	0.405
	2) 17.32-34.34%	3) 34.35-53.84%	0.003	0.0108	0.32	0.753
	2) 17.32-34.34%	4) > 53.85%	0.006	0.0096	0.66	0.510
	3) 34.35-53.84%	4) > 53.85%	0.003	0.0109	0.27	0.787
c. Stipend for professional development activities that took place outside regular work hours	1) <17.31%	2) 17.32-34.34%	-0.020	0.0139	-1.43	0.157
	1) <17.31%	3) 34.35-53.84%	-0.047**	0.0132	-3.59	0.001
	1) <17.31%	4) > 53.85%	-0.107***	0.0132	-8.07	0.000
	2) 17.32-34.34%	3) 34.35-53.84%	-0.027	0.0147	-1.87	0.065
	2) 17.32-34.34%	4) > 53.85%	-0.087***	0.0134	-6.49	0.000
d. Full or partial reimbursement of college tuition	3) 34.35-53.84%	4) > 53.85%	-0.059***	0.0143	-4.16	0.000
	1) <17.31%	2) 17.32-34.34%	0.031**	0.0104	3.00	0.004
	1) <17.31%	3) 34.35-53.84%	0.057***	0.0109	5.25	0.000
	1) <17.31%	4) > 53.85%	0.076***	0.0112	6.74	0.000
	2) 17.32-34.34%	3) 34.35-53.84%	0.026**	0.0089	2.94	0.004
e. Reimbursement for conference or workshop fees	2) 17.32-34.34%	4) > 53.85%	0.045***	0.0081	5.56	0.000
	3) 34.35-53.84%	4) > 53.85%	0.019*	0.0092	2.02	0.046
	1) <17.31%	2) 17.32-34.34%	0.045***	0.0123	3.66	0.000
	1) <17.31%	3) 34.35-53.84%	0.056***	0.0125	4.50	0.000
	1) <17.31%	4) > 53.85%	0.149***	0.0128	11.63	0.000
	2) 17.32-34.34%	3) 34.35-53.84%	0.011	0.0122	0.92	0.361
f. Reimbursement for travel and/or daily expenses	2) 17.32-34.34%	4) > 53.85%	0.104***	0.0126	8.26	0.000
	3) 34.35-53.84%	4) > 53.85%	0.093***	0.0125	7.45	0.000
	1) <17.31%	2) 17.32-34.34%	-0.011	0.0132	-0.81	0.422
	1) <17.31%	3) 34.35-53.84%	-0.024*	0.0120	-2.04	0.045
	1) <17.31%	4) > 53.85%	0.027*	0.0118	2.24	0.028
	2) 17.32-34.34%	3) 34.35-53.84%	-0.014	0.0119	-1.16	0.248
	2) 17.32-34.34%	4) > 53.85%	0.037**	0.0112	3.33	0.001
	3) 34.35-53.84%	4) > 53.85%	0.051***	0.0101	5.07	0.000

\* Difference is significant (p<.05) \*\*Difference is significant (p<.01) \*\*\*Difference is significant (p<.001)

Source: National Center for Education Statistics, 2003-04 Schools and Staffing Survey

**Table 27. Differences in Participation in Formal Professional Development Activities by School LEP (Limited English Proficient) Enrollment**

Types of formal professional development activities	Percent LEP Enrollment (A)	Percent LEP Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
1) University courses related to teaching	1) 0%	2) 0.0-2.5%	-0.009	0.0134	-0.66	0.514
	1) 0%	3) 2.5-5.0%	-0.001	0.0127	-0.11	0.914
	1) 0%	4) 5.0-10.0%	-0.007	0.0160	-0.47	0.640
	1) 0%	5) >10.0%	-0.043***	0.0103	-4.20	0.000
	2) 0.0-2.5%	3) 2.5-5.0%	0.007	0.0180	0.41	0.682
	2) 0.0-2.5%	4) 5.0-10.0%	0.001	0.0173	0.07	0.941
	2) 0.0-2.5%	5) >10.0%	-0.035*	0.0138	-2.50	0.014
	3) 2.5-5.0%	4) 5.0-10.0%	-0.006	0.0197	-0.31	0.757
	3) 2.5-5.0%	5) >10.0%	-0.042**	0.0156	-2.69	0.008
	4) 5.0-10.0%	5) >10.0%	-0.036*	0.0176	-2.03	0.045
2) Observational visits to other schools	1) 0%	2) 0.0-2.5%	0.037**	0.0113	3.27	0.002
	1) 0%	3) 2.5-5.0%	-0.006	0.0165	-0.38	0.705
	1) 0%	4) 5.0-10.0%	-0.004	0.0134	-0.29	0.775
	1) 0%	5) >10.0%	-0.052***	0.0091	-5.73	0.000
	2) 0.0-2.5%	3) 2.5-5.0%	-0.043*	0.0176	-2.45	0.016
	2) 0.0-2.5%	4) 5.0-10.0%	-0.041*	0.0169	-2.41	0.018
	2) 0.0-2.5%	5) >10.0%	-0.089***	0.0135	-6.61	0.000
	3) 2.5-5.0%	4) 5.0-10.0%	0.002	0.0191	0.13	0.900
	3) 2.5-5.0%	5) >10.0%	-0.046**	0.0167	-2.75	0.007
	4) 5.0-10.0%	5) >10.0%	-0.048**	0.0150	-3.22	0.002
3) Workshops, conferences, or training sessions (not a presenter)	1) 0%	2) 0.0-2.5%	-0.021	0.0133	-1.58	0.118
	1) 0%	3) 2.5-5.0%	-0.031	0.0165	-1.91	0.060
	1) 0%	4) 5.0-10.0%	-0.019	0.0138	-1.39	0.169
	1) 0%	5) >10.0%	-0.035***	0.0093	-3.75	0.000
	2) 0.0-2.5%	3) 2.5-5.0%	-0.011	0.0191	-0.55	0.583
	2) 0.0-2.5%	4) 5.0-10.0%	0.002	0.0160	0.11	0.909
	2) 0.0-2.5%	5) >10.0%	-0.014	0.0139	-0.99	0.324
	3) 2.5-5.0%	4) 5.0-10.0%	0.012	0.0191	0.64	0.521
	3) 2.5-5.0%	5) >10.0%	-0.003	0.0170	-0.19	0.847
	4) 5.0-10.0%	5) >10.0%	-0.016	0.0138	-1.13	0.263
4) Presenter at workshops, conferences, or training sessions	1) 0%	2) 0.0-2.5%	0.005	0.0098	0.50	0.620
	1) 0%	3) 2.5-5.0%	-0.004	0.0104	-0.41	0.685
	1) 0%	4) 5.0-10.0%	-0.006	0.0087	-0.75	0.458
	1) 0%	5) >10.0%	-0.014*	0.0055	-2.48	0.015
	2) 0.0-2.5%	3) 2.5-5.0%	-0.009	0.0134	-0.68	0.499
	2) 0.0-2.5%	4) 5.0-10.0%	-0.011	0.0115	-0.99	0.325
	2) 0.0-2.5%	5) >10.0%	-0.019*	0.0092	-2.01	0.047
	3) 2.5-5.0%	4) 5.0-10.0%	-0.002	0.0131	-0.17	0.864
	3) 2.5-5.0%	5) >10.0%	-0.009	0.0093	-1.01	0.315
	4) 5.0-10.0%	5) >10.0%	-0.007	0.0090	-0.79	0.430

\* Difference is significant (p<.05)    \*\*Difference is significant (p<.01)    \*\*\*Difference is significant (p<.001)

**Table 28. Differences in Participation in Professional Development on 4 Topics by School LEP (Limited English Proficient) Enrollment**

Topic of professional development activities	Percent LEP Enrollment (A)	Percent LEP Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
1) the content of the subject(s) they teach	1) 0%	2) 0.0-2.5%	0.036	0.0152	2.35	0.021
	1) 0%	3) 2.5-5.0%	-0.007	0.0116	-0.59	0.560
	1) 0%	4) 5.0-10.0%	-0.019	0.0123	-1.54	0.128
	1) 0%	5) >10.0%	-0.050***	0.0066	-7.69	0.000
	2) 0.0-2.5%	3) 2.5-5.0%	-0.043*	0.0161	-2.65	0.010
	2) 0.0-2.5%	4) 5.0-10.0%	-0.055**	0.0184	-2.96	0.004
	2) 0.0-2.5%	5) >10.0%	-0.086***	0.0144	-5.97	0.000
	3) 2.5-5.0%	4) 5.0-10.0%	-0.012	0.0157	-0.77	0.444
	3) 2.5-5.0%	5) >10.0%	-0.044***	0.0111	-3.93	0.000
2) uses of computers for instruction	4) 5.0-10.0%	5) >10.0%	-0.032*	0.0119	-2.65	0.010
	1) 0%	2) 0.0-2.5%	-0.017	0.0150	-1.15	0.252
	1) 0%	3) 2.5-5.0%	-0.033*	0.0149	-2.23	0.028
	1) 0%	4) 5.0-10.0%	-0.009	0.0160	-0.59	0.555
	1) 0%	5) >10.0%	0.027**	0.0100	2.76	0.007
	2) 0.0-2.5%	3) 2.5-5.0%	-0.016	0.0198	-0.80	0.424
	2) 0.0-2.5%	4) 5.0-10.0%	0.008	0.0181	0.43	0.668
	2) 0.0-2.5%	5) >10.0%	0.045*	0.0173	2.59	0.011
	3) 2.5-5.0%	4) 5.0-10.0%	0.024	0.0184	1.29	0.201
3) reading instruction	3) 2.5-5.0%	5) >10.0%	0.061**	0.0172	3.53	0.001
	4) 5.0-10.0%	5) >10.0%	0.037*	0.0172	2.15	0.034
	1) 0%	2) 0.0-2.5%	0.339***	0.0786	4.31	0.000
	1) 0%	3) 2.5-5.0%	0.088	0.0789	1.12	0.268
	1) 0%	4) 5.0-10.0%	-0.035	0.0820	-0.43	0.667
	1) 0%	5) >10.0%	-0.127**	0.0434	-2.94	0.004
	2) 0.0-2.5%	3) 2.5-5.0%	-0.251*	0.1022	-2.46	0.016
	2) 0.0-2.5%	4) 5.0-10.0%	-0.375***	0.0985	-3.80	0.000
	2) 0.0-2.5%	5) >10.0%	-0.467***	0.0747	-6.25	0.000
4) student discipline and management in the classroom	3) 2.5-5.0%	4) 5.0-10.0%	-0.123	0.1013	-1.22	0.226
	3) 2.5-5.0%	5) >10.0%	-0.215**	0.0752	-2.86	0.005
	4) 5.0-10.0%	5) >10.0%	-0.092	0.0800	-1.15	0.253
	1) 0%	2) 0.0-2.5%	0.008	0.0146	0.52	0.602
	1) 0%	3) 2.5-5.0%	0.025	0.0148	1.71	0.090
	1) 0%	4) 5.0-10.0%	-0.018	0.0165	-1.10	0.274
	1) 0%	5) >10.0%	-0.041***	0.0095	-4.35	0.000
	2) 0.0-2.5%	3) 2.5-5.0%	0.018	0.0179	1.00	0.322
	2) 0.0-2.5%	4) 5.0-10.0%	-0.026	0.0187	-1.38	0.171
2) 0.0-2.5%	5) >10.0%	-0.049**	0.0146	-3.36	0.001	
3) 2.5-5.0%	4) 5.0-10.0%	-0.044*	0.0183	-2.38	0.019	
3) 2.5-5.0%	5) >10.0%	-0.067***	0.0161	-4.16	0.000	
4) 5.0-10.0%	5) >10.0%	-0.023	0.0159	-1.46	0.147	

\* Difference is significant (p<.05) \*\*Difference is significant (p<.01) \*\*\*Difference is significant (p<.001)

Source: National Center for Education Statistics, 2003-04 Schools and Staffing Survey

**Table 29. Differences in Reported Supports for Participating in Professional Development Activities by School LEP (Limited English Proficient) Enrollment**

Types of support for professional development participation	Percent LEP Enrollment (A)	Percent LEP Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
a. Release time from teaching (i.e., your regular teaching responsibilities were temporarily assigned to someone else)	1) 0%	2) 0.0-2.5%	0.021	0.0188	1.11	0.271
	1) 0%	3) 2.5-5.0%	0.031	0.0190	1.63	0.106
	1) 0%	4) 5.0-10.0%	-0.009	0.0148	-0.58	0.565
	1) 0%	5) >10.0%	-0.021*	0.0098	-2.12	0.037
	2) 0.0-2.5%	3) 2.5-5.0%	0.010	0.0251	0.40	0.687
	2) 0.0-2.5%	4) 5.0-10.0%	-0.029	0.0207	-1.42	0.159
	2) 0.0-2.5%	5) >10.0%	-0.042*	0.0182	-2.28	0.025
	3) 2.5-5.0%	4) 5.0-10.0%	-0.040*	0.0196	-2.02	0.047
	3) 2.5-5.0%	5) >10.0%	-0.052**	0.0193	-2.68	0.009
b. Scheduled time in the contract year for professional development	1) 0%	2) 0.0-2.5%	0.017	0.0146	1.17	0.247
	1) 0%	3) 2.5-5.0%	0.013	0.0135	0.96	0.338
	1) 0%	4) 5.0-10.0%	-0.019	0.0149	-1.29	0.199
	1) 0%	5) >10.0%	0.001	0.0082	0.13	0.895
	2) 0.0-2.5%	3) 2.5-5.0%	-0.004	0.0196	-0.21	0.836
	2) 0.0-2.5%	4) 5.0-10.0%	-0.036	0.0192	-1.89	0.062
	2) 0.0-2.5%	5) >10.0%	-0.016	0.0142	-1.12	0.266
	3) 2.5-5.0%	4) 5.0-10.0%	-0.032	0.0191	-1.69	0.095
	3) 2.5-5.0%	5) >10.0%	-0.012	0.0140	-0.85	0.399
c. Stipend for professional development activities that took place outside regular work hours	1) 0%	2) 0.0-2.5%	0.048**	0.0161	3.00	0.003
	1) 0%	3) 2.5-5.0%	0.031	0.0162	1.94	0.055
	1) 0%	4) 5.0-10.0%	0.018	0.0174	1.01	0.314
	1) 0%	5) >10.0%	-0.006	0.0115	-0.49	0.625
	2) 0.0-2.5%	3) 2.5-5.0%	-0.017	0.0204	-0.83	0.407
	2) 0.0-2.5%	4) 5.0-10.0%	-0.031	0.0209	-1.47	0.144
	2) 0.0-2.5%	5) >10.0%	-0.054**	0.0167	-3.24	0.002
	3) 2.5-5.0%	4) 5.0-10.0%	-0.014	0.0204	-0.68	0.500
	3) 2.5-5.0%	5) >10.0%	-0.037*	0.0186	-1.99	0.049
d. Full or partial reimbursement of college tuition	1) 0%	2) 0.0-2.5%	0.004	0.0118	0.33	0.742
	1) 0%	3) 2.5-5.0%	0.013	0.0125	1.05	0.295
	1) 0%	4) 5.0-10.0%	0.041**	0.0115	3.59	0.001
	1) 0%	5) >10.0%	0.007	0.0064	1.01	0.314
	2) 0.0-2.5%	3) 2.5-5.0%	0.009	0.0152	0.61	0.544
	2) 0.0-2.5%	4) 5.0-10.0%	0.037**	0.0130	2.88	0.005
	2) 0.0-2.5%	5) >10.0%	0.003	0.0110	0.24	0.813
	3) 2.5-5.0%	4) 5.0-10.0%	0.028*	0.0138	2.03	0.046
	3) 2.5-5.0%	5) >10.0%	-0.007	0.0132	-0.50	0.617
4) 5.0-10.0%	5) >10.0%	-0.035**	0.0125	-2.77	0.007	

*Table continues on next page*



**Table 29. Differences in Reported Supports for Participating in Professional Development Activities by School LEP (Limited English Proficient) Enrollment (continued)**

Types of support for professional development participation	Percent LEP Enrollment (A)	Percent LEP Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
e. Reimbursement for conference or workshop fees	1) 0%	2) 0.0-2.5%	-0.002	0.0141	-0.13	0.894
	1) 0%	3) 2.5-5.0%	0.006	0.0204	0.31	0.757
	1) 0%	4) 5.0-10.0%	0.012	0.0179	0.65	0.516
	1) 0%	5) >10.0%	0.019	0.0094	1.99	0.050
	2) 0.0-2.5%	3) 2.5-5.0%	0.008	0.0239	0.34	0.731
	2) 0.0-2.5%	4) 5.0-10.0%	0.014	0.0221	0.61	0.540
	2) 0.0-2.5%	5) >10.0%	0.021	0.0150	1.37	0.174
	3) 2.5-5.0%	4) 5.0-10.0%	0.005	0.0229	0.23	0.816
	3) 2.5-5.0%	5) >10.0%	0.012	0.0199	0.62	0.534
	4) 5.0-10.0%	5) >10.0%	0.007	0.0172	0.41	0.681
f. Reimbursement for travel and/or daily expenses	1) 0%	2) 0.0-2.5%	-0.003	0.0129	-0.23	0.818
	1) 0%	3) 2.5-5.0%	0.058***	0.0150	3.88	0.000
	1) 0%	4) 5.0-10.0%	0.043**	0.0151	2.86	0.005
	1) 0%	5) >10.0%	0.039***	0.0096	4.10	0.000
	2) 0.0-2.5%	3) 2.5-5.0%	0.061**	0.0180	3.39	0.001
	2) 0.0-2.5%	4) 5.0-10.0%	0.046*	0.0183	2.52	0.014
	2) 0.0-2.5%	5) >10.0%	0.042**	0.0131	3.22	0.002
	3) 2.5-5.0%	4) 5.0-10.0%	-0.015	0.0185	-0.81	0.420
	3) 2.5-5.0%	5) >10.0%	-0.019	0.0160	-1.17	0.243
4) 5.0-10.0%	5) >10.0%	-0.004	0.0164	-0.23	0.819	

\* Difference is significant (p<.05) \*\*Difference is significant (p<.01) \*\*\*Difference is significant (p<.001)

**Table 30. Differences in Participation in Job- Embedded Professional Development Activities by School Level (Elementary vs. Secondary)**

Types of job embedded professional development activities	Mean Diff (Elem - Sec)	Std Error	t	P>  t
1) Engaged in individual or collaborative research on a topic of interest to them professionally	0.010	0.0090	1.06	0.292
2) Participated in regularly scheduled collaboration with other teachers on issues of instruction (besides administrative meetings)	-0.112***	0.0073	-15.42	0.000
3) Observed, or was observed by other teachers in their classroom (for at least 10 min.)	-0.016*	0.0077	-2.05	0.043
4) Acted as a coach or mentor to other teachers or staff in their school, or received coaching or mentoring	-0.003	0.0093	-0.29	0.771

\* Difference is significant (p<.05)

\*\*\*Difference is significant (p<.001)

**Table 31. Differences in Influence Teachers Believe They Have Over School Policy by School Level (Elementary vs. Secondary)**

Areas of influence	Mean Diff (Elem - Sec)	Std Error	t	P>  t
1) Setting performance standards for students	0.010	0.0160	0.65	0.518
2) Establishing curriculum	-0.284***	0.0174	-16.33	0.000
3) Determining the content of in-service professional development programs	0.082***	0.0169	4.89	0.000
4) Evaluating teachers	-0.042**	0.0138	-3.03	0.003
5) Hiring full-time teachers	0.058**	0.0179	3.21	0.002
6) Setting discipline policy	0.265***	0.0156	17.03	0.000
7) Deciding how the school budget will be spent	0.133***	0.0155	8.60	0.000

\*\*Difference is significant (p<.01)

\*\*\*Difference is significant (p<.001)

**Table 32. Differences in Teacher Attitudes and School Climate by School Level (Elementary vs. Secondary)**

Attitudes	Mean Diff (Elem - Sec)	Std Error	t	P>  t
1) There is a great deal of cooperative effort among staff members	0.196***	0.0173	11.30	0.000
2) They are given the supports they need to teach students with special needs	0.022	0.0189	1.19	0.238
3) They make a conscious effort to coordinate the content of their courses with that of other teachers	0.214***	0.0131	16.34	0.000

\*\*\*Difference is significant (p<.001)

**Table 33. Differences in Participation in Job- Embedded Professional Development Activities by School Urbanicity (1-Large town/central “urban”, 2-Urban fringe “suburban”, 3-Small town/rural)**

Types of formal professional development activities	Urbanicity (A)	Urbanicity (B)	Mean Diff (A-B)	Std Error	t	P>  t
1) Engaged in individual or collaborative research on a topic of interest to them professionally	1) Urban	2) Suburban	-0.022*	0.0110	-2.01	0.047
	1) Urban	3) Rural	0.042**	0.0118	3.54	0.001
	2) Suburban	3) Rural	0.064***	0.0099	6.44	0.000
2) Participated in regularly scheduled collaboration with other teachers on issues of instruction (besides administrative meetings)	1) Urban	2) Suburban	0.018	0.0098	1.82	0.072
	1) Urban	3) Rural	0.082***	0.0116	7.02	0.000
	2) Suburban	3) Rural	0.064***	0.0109	5.87	0.000
3) Observed, or was observed by other teachers in their classroom (for at least 10 min.)	1) Urban	2) Suburban	0.054***	0.0105	5.12	0.000
	1) Urban	3) Rural	0.121***	0.0114	10.59	0.000
	2) Suburban	3) Rural	0.067***	0.0109	6.12	0.000
4) Acted as a coach or mentor to other teachers or staff in their school, or received coaching or mentoring	1) Urban	2) Suburban	0.016	0.0103	1.52	0.132
	1) Urban	3) Rural	0.072***	0.0130	5.55	0.000
	2) Suburban	3) Rural	0.056***	0.0117	4.83	0.000

\* Difference is significant (p<.05) \*\*Difference is significant (p<.01) \*\*\*Difference is significant (p<.001)

**Table 34. Differences in Influence Teachers Believe They Have Over School Policy by School Urbanicity (1-Large town/central “urban”, 2-Urban fringe “suburban”, 3-Small town/rural)**

Topic of professional development activities	Urbanicity (A)	Urbanicity (B)	Mean Diff (A-B)	Std Error	t	P>  t
1) Setting performance standards for students	1) Urban	2) Suburban	-0.095***	0.0209	-4.53	0.000
	1) Urban	3) Rural	-0.170***	0.0276	-6.18	0.000
	2) Suburban	3) Rural	-0.076**	0.0221	-3.43	0.001
2) Establishing curriculum	1) Urban	2) Suburban	-0.253***	0.0236	-10.70	0.000
	1) Urban	3) Rural	-0.401***	0.0235	-17.08	0.000
	2) Suburban	3) Rural	-0.149***	0.0203	-7.34	0.000
3) Determining the content of in-service professional development programs	1) Urban	2) Suburban	-0.066**	0.0213	-3.09	0.003
	1) Urban	3) Rural	-0.093***	0.0252	-3.68	0.000
	2) Suburban	3) Rural	-0.027	0.0201	-1.34	0.185
4) Evaluating teachers	1) Urban	2) Suburban	-0.025	0.0185	-1.36	0.177
	1) Urban	3) Rural	-0.010	0.0172	-0.58	0.563
	2) Suburban	3) Rural	0.015	0.0178	0.85	0.397
5) Hiring full-time teachers	1) Urban	2) Suburban	-0.064**	0.0215	-2.97	0.004
	1) Urban	3) Rural	0.041	0.0256	1.61	0.111
	2) Suburban	3) Rural	0.105***	0.0214	4.93	0.000
6) Setting discipline policy	1) Urban	2) Suburban	-0.067**	0.0207	-3.25	0.002
	1) Urban	3) Rural	-0.114***	0.0263	-4.34	0.000
	2) Suburban	3) Rural	-0.047*	0.0232	-2.03	0.046
7) Deciding how the school budget will be spent	1) Urban	2) Suburban	0.014	0.0202	0.70	0.488
	1) Urban	3) Rural	0.091***	0.0211	4.33	0.000
	2) Suburban	3) Rural	0.077***	0.0183	4.23	0.000

\* Difference is significant (p<.05) \*\*Difference is significant (p<.01) \*\*\*Difference is significant (p<.001)

**Table 35. Differences in Teacher Attitudes and School Climate by School Urbanicity (1-Large town/central “urban”, 2-Urban fringe “suburban”, 3-Small town/rural)**

Attitudes	Urbanicity (A)	Urbanicity (B)	Mean Diff (A-B)	Std Error	t	P>  t
1) There is a great deal of cooperative effort among staff members	1) Urban	2) Suburban	-0.106***	0.0188	-5.62	0.000
	1) Urban	3) Rural	-0.067**	0.0217	-3.10	0.003
	2) Suburban	3) Rural	0.038*	0.0188	2.04	0.044
2) They are given the supports they need to teach students with special needs	1) Urban	2) Suburban	-0.175***	0.0227	-7.73	0.000
	1) Urban	3) Rural	-0.248***	0.0244	-10.15	0.000
	2) Suburban	3) Rural	-0.073***	0.0193	-3.77	0.000
3) They make a conscious effort to coordinate the content of their courses with that of other teachers	1) Urban	2) Suburban	-0.022	0.0167	-1.32	0.191
	1) Urban	3) Rural	0.043*	0.0212	2.04	0.045
	2) Suburban	3) Rural	0.065***	0.0171	3.81	0.000

\* Difference is significant (p<.05) \*\*Difference is significant (p<.01) \*\*\*Difference is significant (p<.001)

**Table 36. Differences in Participation in Job- Embedded Professional Development Activities by School Minority Enrollment**

Types of job embedded professional development activities	Percent Minority Enrollment (A)	Percent Minority Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
1) Engaged in individual or collaborative research on a topic of interest to them professionally	1) < 10.5%	2) 10.5-23.0%	-0.002	0.0292	-0.08	0.935
	1) < 10.5%	3) 23.0-44.6%	0.057	0.0308	1.86	0.066
	1) < 10.5%	4) 44.6-77.0%	0.017	0.0313	0.55	0.587
	1) < 10.5%	5) >77%	-0.002	0.0320	-0.07	0.948
	2) 10.5-23.0%	3) 23.0-44.6%	0.060	0.0312	1.91	0.059
	2) 10.5-23.0%	4) 44.6-77.0%	0.019	0.0342	0.57	0.570
	2) 10.5-23.0%	5) >77%	0.000	0.0346	0.01	0.993
	3) 23.0-44.6%	4) 44.6-77.0%	-0.040	0.0338	-1.19	0.237
	3) 23.0-44.6%	5) >77%	-0.059	0.0351	-1.69	0.094
2) Participated in regularly scheduled collaboration with other teachers on issues of instruction (besides administrative meetings)	1) < 10.5%	2) 10.5-23.0%	-0.014	0.0308	-0.45	0.657
	1) < 10.5%	3) 23.0-44.6%	-0.042	0.0235	-1.78	0.078
	1) < 10.5%	4) 44.6-77.0%	-0.056*	0.0272	-2.08	0.041
	1) < 10.5%	5) >77%	-0.068*	0.0279	-2.43	0.017
	2) 10.5-23.0%	3) 23.0-44.6%	-0.028	0.0322	-0.88	0.383
	2) 10.5-23.0%	4) 44.6-77.0%	-0.043	0.0332	-1.29	0.201
	2) 10.5-23.0%	5) >77%	-0.054	0.0331	-1.63	0.107
	3) 23.0-44.6%	4) 44.6-77.0%	-0.014	0.0257	-0.56	0.575
	3) 23.0-44.6%	5) >77%	-0.026	0.0262	-0.98	0.328
3) Observed, or was observed by other teachers in their classroom (for at least 10 min.)	1) < 10.5%	2) 10.5-23.0%	0.054	0.0313	1.73	0.086
	1) < 10.5%	3) 23.0-44.6%	-0.030	0.0339	-0.88	0.382
	1) < 10.5%	4) 44.6-77.0%	-0.111***	0.0304	-3.64	0.000
	1) < 10.5%	5) >77%	-0.120**	0.0331	-3.61	0.001
	2) 10.5-23.0%	3) 23.0-44.6%	-0.084**	0.0306	-2.74	0.007
	2) 10.5-23.0%	4) 44.6-77.0%	-0.165***	0.0299	-5.52	0.000
	2) 10.5-23.0%	5) >77%	-0.174***	0.0276	-6.31	0.000
	3) 23.0-44.6%	4) 44.6-77.0%	-0.081**	0.0305	-2.66	0.009
	3) 23.0-44.6%	5) >77%	-0.090**	0.0284	-3.17	0.002
4) Acted as a coach or mentor to other teachers or staff in their school, or received coaching or mentoring	1) < 10.5%	2) 10.5-23.0%	-0.016	0.0328	-0.49	0.626
	1) < 10.5%	3) 23.0-44.6%	-0.087*	0.0353	-2.45	0.016
	1) < 10.5%	4) 44.6-77.0%	-0.147***	0.0315	-4.66	0.000
	1) < 10.5%	5) >77%	-0.119***	0.0315	-3.78	0.000
	2) 10.5-23.0%	3) 23.0-44.6%	-0.071*	0.0350	-2.02	0.047
	2) 10.5-23.0%	4) 44.6-77.0%	-0.131***	0.0352	-3.71	0.000
	2) 10.5-23.0%	5) >77%	-0.103**	0.0369	-2.79	0.006
	3) 23.0-44.6%	4) 44.6-77.0%	-0.060	0.0365	-1.64	0.104
	3) 23.0-44.6%	5) >77%	-0.032	0.0378	-0.86	0.394
	4) 44.6-77.0%	5) >77%	0.028	0.0326	0.85	0.400

\* Difference is significant (p<.05) \*\*Difference is significant (p<.01) \*\*\*Difference is significant (p<.001)

Source: National Center for Education Statistics, 2003-04 Schools and Staffing Survey

**Table 37. Differences in Influence Teachers Believe They Have Over School Policy  
by School Minority Enrollment**

Area of influence	Percent Minority Enrollment (A)	Percent Minority Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
1) Setting performance standards for students	1) < 10.5%	2) 10.5-23.0%	-0.055	0.0659	-0.83	0.409
	1) < 10.5%	3) 23.0-44.6%	0.154*	0.0660	2.33	0.022
	1) < 10.5%	4) 44.6-77.0%	0.054	0.0760	0.72	0.475
	1) < 10.5%	5) >77%	0.120	0.0674	1.78	0.078
	2) 10.5-23.0%	3) 23.0-44.6%	0.209**	0.0689	3.03	0.003
	2) 10.5-23.0%	4) 44.6-77.0%	0.109	0.0721	1.51	0.133
	2) 10.5-23.0%	5) >77%	0.175**	0.0621	2.81	0.006
	3) 23.0-44.6%	4) 44.6-77.0%	-0.100	0.0774	-1.28	0.202
	3) 23.0-44.6%	5) >77%	-0.034	0.0733	-0.46	0.645
2) Establishing curriculum	4) 44.6-77.0%	5) >77%	0.066	0.0835	0.79	0.434
	1) < 10.5%	2) 10.5-23.0%	-0.002	0.0705	-0.03	0.980
	1) < 10.5%	3) 23.0-44.6%	0.217**	0.0616	3.52	0.001
	1) < 10.5%	4) 44.6-77.0%	0.268***	0.0691	3.88	0.000
	1) < 10.5%	5) >77%	0.390***	0.0707	5.52	0.000
	2) 10.5-23.0%	3) 23.0-44.6%	0.219**	0.0737	2.97	0.004
	2) 10.5-23.0%	4) 44.6-77.0%	0.270**	0.0848	3.18	0.002
	2) 10.5-23.0%	5) >77%	0.392***	0.0803	4.89	0.000
	3) 23.0-44.6%	4) 44.6-77.0%	0.051	0.0801	0.64	0.525
3) Determining the content of in-service professional development programs	3) 23.0-44.6%	5) >77%	0.174*	0.0785	2.21	0.030
	4) 44.6-77.0%	5) >77%	0.123	0.0851	1.44	0.154
	1) < 10.5%	2) 10.5-23.0%	0.047	0.0671	0.70	0.485
	1) < 10.5%	3) 23.0-44.6%	0.116	0.0663	1.75	0.084
	1) < 10.5%	4) 44.6-77.0%	0.100	0.0784	1.28	0.205
	1) < 10.5%	5) >77%	0.154*	0.0751	2.05	0.043
	2) 10.5-23.0%	3) 23.0-44.6%	0.069	0.0733	0.94	0.352
	2) 10.5-23.0%	4) 44.6-77.0%	0.053	0.0777	0.68	0.497
	2) 10.5-23.0%	5) >77%	0.107	0.0715	1.50	0.139
4) Evaluating teachers	3) 23.0-44.6%	4) 44.6-77.0%	-0.016	0.0802	-0.19	0.846
	3) 23.0-44.6%	5) >77%	0.038	0.0640	0.60	0.552
	4) 44.6-77.0%	5) >77%	0.054	0.0819	0.66	0.512
	1) < 10.5%	2) 10.5-23.0%	0.019	0.0514	0.36	0.716
	1) < 10.5%	3) 23.0-44.6%	0.142**	0.0457	3.10	0.003
	1) < 10.5%	4) 44.6-77.0%	0.067	0.0549	1.22	0.226
	1) < 10.5%	5) >77%	0.051	0.0512	1.00	0.322
	2) 10.5-23.0%	3) 23.0-44.6%	0.123*	0.0539	2.28	0.025
	2) 10.5-23.0%	4) 44.6-77.0%	0.048	0.0555	0.87	0.388
2) 10.5-23.0%	5) >77%	0.032	0.0543	0.59	0.554	
3) 23.0-44.6%	4) 44.6-77.0%	-0.075	0.0473	-1.59	0.116	
3) 23.0-44.6%	5) >77%	-0.091	0.0541	-1.68	0.096	
4) 44.6-77.0%	5) >77%	-0.016	0.0522	-0.30	0.761	

*Table continues on next page*

**Table 37. Differences in Influence Teachers Believe They Have Over School Policy by School Minority Enrollment (continued)**

Area of influence	Percent Minority Enrollment (A)	Percent Minority Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
5) Hiring full-time teachers	1) < 10.5%	2) 10.5-23.0%	-0.129	0.0804	-1.60	0.113
	1) < 10.5%	3) 23.0-44.6%	0.030	0.0726	0.42	0.678
	1) < 10.5%	4) 44.6-77.0%	0.152*	0.0720	2.10	0.038
	1) < 10.5%	5) >77%	0.279***	0.0666	4.19	0.000
	2) 10.5-23.0%	3) 23.0-44.6%	0.159	0.0911	1.74	0.085
	2) 10.5-23.0%	4) 44.6-77.0%	0.280**	0.0794	3.53	0.001
	2) 10.5-23.0%	5) >77%	0.408***	0.0858	4.75	0.000
	3) 23.0-44.6%	4) 44.6-77.0%	0.121	0.0794	1.53	0.130
	3) 23.0-44.6%	5) >77%	0.249**	0.0812	3.07	0.003
6) Setting discipline policy	4) 44.6-77.0%	5) >77%	0.128	0.0796	1.60	0.113
	1) < 10.5%	2) 10.5-23.0%	-0.019	0.0791	-0.24	0.811
	1) < 10.5%	3) 23.0-44.6%	-0.008	0.0652	-0.13	0.899
	1) < 10.5%	4) 44.6-77.0%	0.020	0.0826	0.24	0.809
	1) < 10.5%	5) >77%	0.079	0.0612	1.30	0.199
	2) 10.5-23.0%	3) 23.0-44.6%	0.011	0.0875	0.12	0.903
	2) 10.5-23.0%	4) 44.6-77.0%	0.039	0.0887	0.44	0.661
	2) 10.5-23.0%	5) >77%	0.098	0.0834	1.18	0.242
	3) 23.0-44.6%	4) 44.6-77.0%	0.028	0.0887	0.32	0.750
7) Deciding how the school budget will be spent	3) 23.0-44.6%	5) >77%	0.088	0.0682	1.29	0.202
	4) 44.6-77.0%	5) >77%	0.059	0.0801	0.74	0.461
	1) < 10.5%	2) 10.5-23.0%	-0.077	0.0664	-1.17	0.247
	1) < 10.5%	3) 23.0-44.6%	-0.175*	0.0667	-2.63	0.010
	1) < 10.5%	4) 44.6-77.0%	-0.149	0.0754	-1.98	0.050
	1) < 10.5%	5) >77%	-0.029	0.0569	-0.50	0.618
	2) 10.5-23.0%	3) 23.0-44.6%	-0.098	0.0727	-1.35	0.181
	2) 10.5-23.0%	4) 44.6-77.0%	-0.072	0.0774	-0.93	0.354
	2) 10.5-23.0%	5) >77%	0.049	0.0690	0.71	0.480
3) 23.0-44.6%	4) 44.6-77.0%	0.026	0.0907	0.29	0.776	
3) 23.0-44.6%	5) >77%	0.147*	0.0678	2.17	0.033	
4) 44.6-77.0%	5) >77%	0.121	0.0757	1.60	0.114	

\* Difference is significant (p<.05) \*\*Difference is significant (p<.01) \*\*\*Difference is significant (p<.001)

**Table 38. Differences in Teacher Attitudes and School Climate by School Minority Enrollment**

Attitudes	Percent Minority Enrollment (A)	Percent Minority Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
1) There is a great deal of cooperative effort among staff members	1) < 10.5%	2) 10.5-23.0%	0.056	0.0550	1.01	0.316
	1) < 10.5%	3) 23.0-44.6%	0.101	0.0542	1.86	0.066
	1) < 10.5%	4) 44.6-77.0%	0.105	0.0590	1.78	0.078
	1) < 10.5%	5) >77%	0.204**	0.0675	3.02	0.003
	2) 10.5-23.0%	3) 23.0-44.6%	0.045	0.0587	0.77	0.441
	2) 10.5-23.0%	4) 44.6-77.0%	0.049	0.0584	0.85	0.399
	2) 10.5-23.0%	5) >77%	0.148*	0.0652	2.27	0.025
	3) 23.0-44.6%	4) 44.6-77.0%	0.004	0.0634	0.06	0.950
	3) 23.0-44.6%	5) >77%	0.103	0.0702	1.46	0.147
2) They are given the supports they need to teach students with special needs	4) 44.6-77.0%	5) >77%	0.099	0.0646	1.53	0.130
	1) < 10.5%	2) 10.5-23.0%	0.272***	0.0691	3.93	0.000
	1) < 10.5%	3) 23.0-44.6%	0.249***	0.0550	4.53	0.000
	1) < 10.5%	4) 44.6-77.0%	0.329***	0.0779	4.22	0.000
	1) < 10.5%	5) >77%	0.353***	0.0629	5.62	0.000
	2) 10.5-23.0%	3) 23.0-44.6%	-0.023	0.0661	-0.35	0.729
	2) 10.5-23.0%	4) 44.6-77.0%	0.057	0.0777	0.74	0.462
	2) 10.5-23.0%	5) >77%	0.081	0.0659	1.24	0.220
	3) 23.0-44.6%	4) 44.6-77.0%	0.080	0.0763	1.05	0.295
3) They make a conscious effort to coordinate the content of their courses with that of other teachers	3) 23.0-44.6%	5) >77%	0.104	0.0614	1.70	0.092
	4) 44.6-77.0%	5) >77%	0.024	0.0718	0.34	0.738
	1) < 10.5%	2) 10.5-23.0%	-0.002	0.0464	-0.05	0.958
	1) < 10.5%	3) 23.0-44.6%	0.022	0.0484	0.46	0.647
	1) < 10.5%	4) 44.6-77.0%	0.082	0.0459	1.78	0.079
	1) < 10.5%	5) >77%	0.050	0.0482	1.03	0.306
	2) 10.5-23.0%	3) 23.0-44.6%	0.025	0.0465	0.53	0.597
	2) 10.5-23.0%	4) 44.6-77.0%	0.084	0.0425	1.98	0.051
	2) 10.5-23.0%	5) >77%	0.052	0.0454	1.15	0.254
3) 23.0-44.6%	4) 44.6-77.0%	0.059	0.0523	1.14	0.258	
3) 23.0-44.6%	5) >77%	0.027	0.0551	0.50	0.621	
4) 44.6-77.0%	5) >77%	-0.032	0.0473	-0.68	0.498	



**Table 39. Differences in Participation in Job- Embedded Professional Development Activities by School Poverty (Percent of Students Enrolled in the Free and Reduced Lunch Program - FRL)**

Types of job embedded professional development activities	Percent FRL Enrollment (A)	Percent FRL Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
1) Engaged in individual or collaborative research on a topic of interest to them professionally	1) <17.31%	2) 17.32-34.34%	0.043**	0.0126	3.44	0.001
	1) <17.31%	3) 34.35-53.84%	0.084***	0.0125	6.74	0.000
	1) <17.31%	4) > 53.85%	0.075***	0.0122	6.17	0.000
	2) 17.32-34.34%	3) 34.35-53.84%	0.040**	0.0130	3.12	0.002
	2) 17.32-34.34%	4) > 53.85%	0.032*	0.0126	2.52	0.013
	3) 34.35-53.84%	4) > 53.85%	-0.009	0.0133	-0.65	0.520
2) Participated in regularly scheduled collaboration with other teachers on issues of instruction (besides administrative meetings)	1) <17.31%	2) 17.32-34.34%	0.024*	0.0118	2.03	0.046
	1) <17.31%	3) 34.35-53.84%	0.022	0.0146	1.54	0.128
	1) <17.31%	4) > 53.85%	-0.005	0.0107	-0.46	0.648
	2) 17.32-34.34%	3) 34.35-53.84%	-0.001	0.0121	-0.12	0.904
	2) 17.32-34.34%	4) > 53.85%	-0.029**	0.0099	-2.93	0.004
	3) 34.35-53.84%	4) > 53.85%	-0.027*	0.0132	-2.07	0.041
3) Observed, or was observed by other teachers in their classroom (for at least 10 min.)	1) <17.31%	2) 17.32-34.34%	0.002	0.0130	0.18	0.857
	1) <17.31%	3) 34.35-53.84%	0.000	0.0154	0.01	0.991
	1) <17.31%	4) > 53.85%	-0.056***	0.0114	-4.88	0.000
	2) 17.32-34.34%	3) 34.35-53.84%	-0.002	0.0114	-0.19	0.850
	2) 17.32-34.34%	4) > 53.85%	-0.058***	0.0132	-4.39	0.000
	3) 34.35-53.84%	4) > 53.85%	-0.056***	0.0120	-4.63	0.000
4) Acted as a coach or mentor to other teachers or staff in their school, or received coaching or mentoring	1) <17.31%	2) 17.32-34.34%	-0.019	0.0116	-1.66	0.100
	1) <17.31%	3) 34.35-53.84%	0.000	0.0118	-0.02	0.982
	1) <17.31%	4) > 53.85%	-0.030*	0.0123	-2.42	0.017
	2) 17.32-34.34%	3) 34.35-53.84%	0.019	0.0123	1.54	0.127
	2) 17.32-34.34%	4) > 53.85%	-0.010	0.0139	-0.75	0.456
	3) 34.35-53.84%	4) > 53.85%	-0.029*	0.0125	-2.35	0.021

\* Difference is significant (p<.05) \*\*Difference is significant (p<.01) \*\*\*Difference is significant (p<.001)

**Table 40. Differences in Influence Teachers Believe They Have Over School Policy by School Poverty (Percent of Students Enrolled in the Free and Reduced Lunch Program - FRL)**

Area of influence	Percent FRL Enrollment (A)	Percent FRL Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
1) Setting performance standards for students	1) <17.31%	2) 17.32-34.34%	0.084***	0.0206	4.06	0.000
	1) <17.31%	3) 34.35-53.84%	0.083**	0.0258	3.19	0.002
	1) <17.31%	4) > 53.85%	0.109***	0.0241	4.50	0.000
	2) 17.32-34.34%	3) 34.35-53.84%	-0.001	0.0265	-0.05	0.961
	2) 17.32-34.34%	4) > 53.85%	0.025	0.0248	1.00	0.322
	3) 34.35-53.84%	4) > 53.85%	0.026	0.0263	0.99	0.324
2) Establishing curriculum	1) <17.31%	2) 17.32-34.34%	0.131***	0.0295	4.44	0.000
	1) <17.31%	3) 34.35-53.84%	0.173***	0.0278	6.22	0.000
	1) <17.31%	4) > 53.85%	0.315***	0.0273	11.54	0.000
	2) 17.32-34.34%	3) 34.35-53.84%	0.042	0.0259	1.61	0.111
	2) 17.32-34.34%	4) > 53.85%	0.184***	0.0268	6.88	0.000
	3) 34.35-53.84%	4) > 53.85%	0.143***	0.0270	5.27	0.000
3) Determining the content of in-service professional development programs	1) <17.31%	2) 17.32-34.34%	0.093***	0.0247	3.78	0.000
	1) <17.31%	3) 34.35-53.84%	0.099***	0.0270	3.67	0.000
	1) <17.31%	4) > 53.85%	0.117***	0.0256	4.57	0.000
	2) 17.32-34.34%	3) 34.35-53.84%	0.006	0.0246	0.24	0.813
	2) 17.32-34.34%	4) > 53.85%	0.024	0.0272	0.87	0.387
	3) 34.35-53.84%	4) > 53.85%	0.018	0.0267	0.67	0.505
4) Evaluating teachers	1) <17.31%	2) 17.32-34.34%	0.064***	0.0158	4.07	0.000
	1) <17.31%	3) 34.35-53.84%	0.030	0.0192	1.54	0.128
	1) <17.31%	4) > 53.85%	0.052*	0.0198	2.63	0.010
	2) 17.32-34.34%	3) 34.35-53.84%	-0.035*	0.0170	-2.05	0.043
	2) 17.32-34.34%	4) > 53.85%	-0.012	0.0192	-0.65	0.520
	3) 34.35-53.84%	4) > 53.85%	0.022	0.0201	1.12	0.266
5) Hiring full-time teachers	1) <17.31%	2) 17.32-34.34%	0.091***	0.0250	3.63	0.000
	1) <17.31%	3) 34.35-53.84%	0.175***	0.0277	6.34	0.000
	1) <17.31%	4) > 53.85%	0.234***	0.0286	8.19	0.000
	2) 17.32-34.34%	3) 34.35-53.84%	0.085**	0.0250	3.40	0.001
	2) 17.32-34.34%	4) > 53.85%	0.144***	0.0257	5.61	0.000
	3) 34.35-53.84%	4) > 53.85%	0.059*	0.0282	2.09	0.039
6) Setting discipline policy	1) <17.31%	2) 17.32-34.34%	-0.006	0.0232	-0.26	0.794
	1) <17.31%	3) 34.35-53.84%	0.019	0.0274	0.70	0.487
	1) <17.31%	4) > 53.85%	0.058*	0.0231	2.52	0.013
	2) 17.32-34.34%	3) 34.35-53.84%	0.025	0.0310	0.81	0.419
	2) 17.32-34.34%	4) > 53.85%	0.064**	0.0227	2.84	0.006
	3) 34.35-53.84%	4) > 53.85%	0.039	0.0280	1.40	0.167

*Table continues on next page*

**Table 40. Differences in Influence Teachers Believe They Have Over School Policy by School Poverty (Percent of Students Enrolled in the Free and Reduced Lunch Program - FRL) (continued)**

Area of influence	Percent FRL Enrollment (A)	Percent FRL Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
7) Deciding how the school budget will be spent	1) <17.31%	2) 17.32-34.34%	0.007	0.0192	0.34	0.735
	1) <17.31%	3) 34.35-53.84%	0.011	0.0242	0.47	0.637
	1) <17.31%	4) > 53.85%	0.006	0.0214	0.29	0.776
	2) 17.32-34.34%	3) 34.35-53.84%	0.005	0.0273	0.18	0.858
	2) 17.32-34.34%	4) > 53.85%	0.000	0.0236	-0.02	0.986
	3) 34.35-53.84%	4) > 53.85%	-0.005	0.0264	-0.20	0.841

\* Difference is significant (p<.05) \*\*Difference is significant (p<.01) \*\*\*Difference is significant (p<.001)

**Table 41. Differences in Teacher Attitudes and School Climate by School Poverty (Percent of Students Enrolled in the Free and Reduced Lunch Program)**

Attitudes	Percent FRL Enrollment (A)	Percent FRL Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
1) There is a great deal of cooperative effort among staff members	1) <17.31%	2) 17.32-34.34%	0.056*	0.0226	2.48	0.015
	1) <17.31%	3) 34.35-53.84%	0.084***	0.0222	3.78	0.000
	1) <17.31%	4) > 53.85%	0.081***	0.0221	3.65	0.000
	2) 17.32-34.34%	3) 34.35-53.84%	0.028	0.0239	1.16	0.247
	2) 17.32-34.34%	4) > 53.85%	0.025	0.0203	1.21	0.228
	3) 34.35-53.84%	4) > 53.85%	-0.003	0.0213	-0.15	0.883
2) They are given the supports they need to teach students with special needs	1) <17.31%	2) 17.32-34.34%	0.063*	0.0238	2.63	0.010
	1) <17.31%	3) 34.35-53.84%	0.075**	0.0263	2.84	0.006
	1) <17.31%	4) > 53.85%	0.127***	0.0245	5.19	0.000
	2) 17.32-34.34%	3) 34.35-53.84%	0.012	0.0234	0.51	0.610
	2) 17.32-34.34%	4) > 53.85%	0.064*	0.0249	2.59	0.011
	3) 34.35-53.84%	4) > 53.85%	0.052*	0.0259	2.02	0.046
3) They make a conscious effort to coordinate the content of their courses with that of other teachers	1) <17.31%	2) 17.32-34.34%	0.028	0.0209	1.34	0.183
	1) <17.31%	3) 34.35-53.84%	0.039	0.0198	1.98	0.051
	1) <17.31%	4) > 53.85%	0.014	0.0192	0.74	0.462
	2) 17.32-34.34%	3) 34.35-53.84%	0.011	0.0182	0.61	0.544
	2) 17.32-34.34%	4) > 53.85%	-0.014	0.0200	-0.69	0.492
	3) 34.35-53.84%	4) > 53.85%	-0.025	0.0195	-1.28	0.205

\* Difference is significant (p<.05) \*\*Difference is significant (p<.01) \*\*\*Difference is significant (p<.001)

**Table 42. Differences in Participation in Job- Embedded Professional Development Activities by School LEP (Limited English Proficient) Enrollment**

Types of job embedded professional development activities	Percent LEP Enrollment (A)	Percent LEP Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
1) Engaged in individual or collaborative research on a topic of interest to them professionally	1) 0%	2) 0.0-2.5%	-0.054**	0.0153	-3.50	0.001
	1) 0%	3) 2.5-5.0%	-0.043**	0.0153	-2.83	0.006
	1) 0%	4) 5.0-10.0%	-0.065**	0.0193	-3.39	0.001
	1) 0%	5) >10.0%	-0.032**	0.0091	-3.48	0.001
	2) 0.0-2.5%	3) 2.5-5.0%	0.010	0.0221	0.47	0.638
	2) 0.0-2.5%	4) 5.0-10.0%	-0.012	0.0220	-0.54	0.591
	2) 0.0-2.5%	5) >10.0%	0.022	0.0157	1.39	0.168
	3) 2.5-5.0%	4) 5.0-10.0%	-0.022	0.0250	-0.89	0.375
	3) 2.5-5.0%	5) >10.0%	0.011	0.0190	0.60	0.551
2) Participated in regularly scheduled collaboration with other teachers on issues of instruction (besides administrative meetings)	4) 5.0-10.0%	5) >10.0%	0.034	0.0197	1.71	0.091
	1) 0%	2) 0.0-2.5%	0.005	0.0146	0.37	0.709
	1) 0%	3) 2.5-5.0%	-0.033*	0.0159	-2.11	0.038
	1) 0%	4) 5.0-10.0%	-0.026	0.0161	-1.62	0.110
	1) 0%	5) >10.0%	-0.029**	0.0090	-3.18	0.002
	2) 0.0-2.5%	3) 2.5-5.0%	-0.039	0.0208	-1.87	0.065
	2) 0.0-2.5%	4) 5.0-10.0%	-0.031	0.0175	-1.80	0.075
	2) 0.0-2.5%	5) >10.0%	-0.034*	0.0158	-2.17	0.032
	3) 2.5-5.0%	4) 5.0-10.0%	0.007	0.0231	0.32	0.752
3) Observed, or was observed by other teachers in their classroom (for at least 10 min.)	3) 2.5-5.0%	5) >10.0%	0.005	0.0171	0.27	0.790
	4) 5.0-10.0%	5) >10.0%	-0.003	0.0168	-0.17	0.869
	1) 0%	2) 0.0-2.5%	-0.056***	0.0139	-4.01	0.000
	1) 0%	3) 2.5-5.0%	-0.021	0.0164	-1.30	0.197
	1) 0%	4) 5.0-10.0%	-0.053**	0.0167	-3.14	0.002
	1) 0%	5) >10.0%	-0.075***	0.0095	-7.87	0.000
	2) 0.0-2.5%	3) 2.5-5.0%	0.035	0.0196	1.76	0.082
	2) 0.0-2.5%	4) 5.0-10.0%	0.003	0.0212	0.16	0.877
	2) 0.0-2.5%	5) >10.0%	-0.019	0.0140	-1.36	0.176
4) Acted as a coach or mentor to other teachers or staff in their school, or received coaching or mentoring	3) 2.5-5.0%	4) 5.0-10.0%	-0.031	0.0228	-1.37	0.174
	3) 2.5-5.0%	5) >10.0%	-0.054**	0.0171	-3.13	0.002
	4) 5.0-10.0%	5) >10.0%	-0.022	0.0171	-1.31	0.194
	1) 0%	2) 0.0-2.5%	-0.042**	0.0140	-3.00	0.004
	1) 0%	3) 2.5-5.0%	-0.019	0.0177	-1.10	0.275
	1) 0%	4) 5.0-10.0%	-0.035	0.0177	-1.96	0.053
	1) 0%	5) >10.0%	-0.025*	0.0096	-2.60	0.011
	2) 0.0-2.5%	3) 2.5-5.0%	0.022	0.0200	1.12	0.265
	2) 0.0-2.5%	4) 5.0-10.0%	0.007	0.0207	0.35	0.727
2) 0.0-2.5%	5) >10.0%	0.017	0.0144	1.19	0.238	
3) 2.5-5.0%	4) 5.0-10.0%	-0.015	0.0247	-0.62	0.539	
3) 2.5-5.0%	5) >10.0%	-0.005	0.0193	-0.28	0.782	
4) 5.0-10.0%	5) >10.0%	0.010	0.0178	0.55	0.582	

\* Difference is significant (p<.05) \*\*Difference is significant (p<.01) \*\*\*Difference is significant (p<.001)

**Table 43. Differences in Influence Teachers Believe They Have Over School Policy by School LEP (Limited English Proficient) Enrollment**

Area of influence	Percent LEP Enrollment (A)	Percent LEP Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
1) Setting performance standards for students	1) 0%	2) 0.0-2.5%	0.005	0.0284	0.18	0.857
	1) 0%	3) 2.5-5.0%	0.035	0.0356	0.99	0.324
	1) 0%	4) 5.0-10.0%	0.086*	0.0352	2.45	0.016
	1) 0%	5) >10.0%	0.016	0.0189	0.84	0.403
	2) 0.0-2.5%	3) 2.5-5.0%	0.030	0.0420	0.72	0.474
	2) 0.0-2.5%	4) 5.0-10.0%	0.081	0.0494	1.64	0.104
	2) 0.0-2.5%	5) >10.0%	0.011	0.0299	0.36	0.720
	3) 2.5-5.0%	4) 5.0-10.0%	0.051	0.0488	1.04	0.300
	3) 2.5-5.0%	5) >10.0%	-0.019	0.0349	-0.56	0.579
2) Establishing curriculum	4) 5.0-10.0%	5) >10.0%	-0.070	0.0382	-1.84	0.069
	1) 0%	2) 0.0-2.5%	-0.081*	0.0323	-2.50	0.014
	1) 0%	3) 2.5-5.0%	0.000	0.0419	-0.01	0.995
	1) 0%	4) 5.0-10.0%	0.071	0.0356	2.01	0.048
	1) 0%	5) >10.0%	0.083***	0.0203	4.11	0.000
	2) 0.0-2.5%	3) 2.5-5.0%	0.080	0.0487	1.65	0.103
	2) 0.0-2.5%	4) 5.0-10.0%	0.152**	0.0439	3.46	0.001
	2) 0.0-2.5%	5) >10.0%	0.164***	0.0333	4.92	0.000
	3) 2.5-5.0%	4) 5.0-10.0%	0.072	0.0508	1.41	0.161
3) Determining the content of in-service professional development programs	3) 2.5-5.0%	5) >10.0%	0.084*	0.0404	2.07	0.041
	4) 5.0-10.0%	5) >10.0%	0.012	0.0403	0.29	0.769
	1) 0%	2) 0.0-2.5%	0.054*	0.0242	2.24	0.028
	1) 0%	3) 2.5-5.0%	0.046	0.0377	1.21	0.228
	1) 0%	4) 5.0-10.0%	0.079**	0.0291	2.73	0.008
	1) 0%	5) >10.0%	0.004	0.0175	0.24	0.808
	2) 0.0-2.5%	3) 2.5-5.0%	-0.008	0.0430	-0.19	0.847
	2) 0.0-2.5%	4) 5.0-10.0%	0.025	0.0378	0.67	0.506
	2) 0.0-2.5%	5) >10.0%	-0.050	0.0280	-1.78	0.078
4) Evaluating teachers	3) 2.5-5.0%	4) 5.0-10.0%	0.034	0.0436	0.77	0.444
	3) 2.5-5.0%	5) >10.0%	-0.042	0.0378	-1.10	0.274
	4) 5.0-10.0%	5) >10.0%	-0.075**	0.0289	-2.60	0.011
	1) 0%	2) 0.0-2.5%	-0.024	0.0241	-1.01	0.313
	1) 0%	3) 2.5-5.0%	0.025	0.0260	0.98	0.330
	1) 0%	4) 5.0-10.0%	-0.005	0.0264	-0.19	0.851
	1) 0%	5) >10.0%	-0.029	0.0158	-1.84	0.069
	2) 0.0-2.5%	3) 2.5-5.0%	0.050	0.0279	1.79	0.077
	2) 0.0-2.5%	4) 5.0-10.0%	0.020	0.0326	0.60	0.551
2) 0.0-2.5%	5) >10.0%	-0.005	0.0270	-0.17	0.864	
3) 2.5-5.0%	4) 5.0-10.0%	-0.030	0.0348	-0.88	0.383	
3) 2.5-5.0%	5) >10.0%	-0.055*	0.0271	-2.02	0.047	
4) 5.0-10.0%	5) >10.0%	-0.024	0.0281	-0.86	0.393	

*Table continues on next page*

Source: National Center for Education Statistics, 2003-04 Schools and Staffing Survey

**Table 43. Differences in Influence Teachers Believe They Have Over School Policy by School LEP (Limited English Proficient) Enrollment (continued)**

Area of influence	Percent LEP Enrollment (A)	Percent LEP Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
5) Hiring full-time teachers	1) 0%	2) 0.0-2.5%	-0.036	0.0251	-1.43	0.157
	1) 0%	3) 2.5-5.0%	-0.034	0.0368	-0.94	0.352
	1) 0%	4) 5.0-10.0%	-0.074*	0.0330	-2.24	0.028
	1) 0%	5) >10.0%	-0.027	0.0191	-1.43	0.155
	2) 0.0-2.5%	3) 2.5-5.0%	0.001	0.0417	0.03	0.973
	2) 0.0-2.5%	4) 5.0-10.0%	-0.038	0.0380	-1.00	0.320
	2) 0.0-2.5%	5) >10.0%	0.008	0.0300	0.28	0.780
	3) 2.5-5.0%	4) 5.0-10.0%	-0.039	0.0458	-0.86	0.393
	3) 2.5-5.0%	5) >10.0%	0.007	0.0392	0.18	0.858
4) 5.0-10.0%	5) >10.0%	0.046	0.0381	1.22	0.226	
6) Setting discipline policy	1) 0%	2) 0.0-2.5%	0.111***	0.0299	3.73	0.000
	1) 0%	3) 2.5-5.0%	0.052	0.0370	1.40	0.165
	1) 0%	4) 5.0-10.0%	0.028	0.0275	1.02	0.308
	1) 0%	5) >10.0%	-0.024	0.0190	-1.27	0.209
	2) 0.0-2.5%	3) 2.5-5.0%	-0.060	0.0431	-1.38	0.171
	2) 0.0-2.5%	4) 5.0-10.0%	-0.083*	0.0353	-2.36	0.021
	2) 0.0-2.5%	5) >10.0%	-0.135***	0.0302	-4.49	0.000
	3) 2.5-5.0%	4) 5.0-10.0%	-0.024	0.0441	-0.54	0.593
	3) 2.5-5.0%	5) >10.0%	-0.076*	0.0336	-2.26	0.027
4) 5.0-10.0%	5) >10.0%	-0.052	0.0285	-1.83	0.070	
7) Deciding how the school budget will be spent	1) 0%	2) 0.0-2.5%	-0.021	0.0214	-0.98	0.332
	1) 0%	3) 2.5-5.0%	0.009	0.0282	0.32	0.753
	1) 0%	4) 5.0-10.0%	-0.079*	0.0314	-2.52	0.013
	1) 0%	5) >10.0%	-0.098***	0.0161	-6.07	0.000
	2) 0.0-2.5%	3) 2.5-5.0%	0.030	0.0364	0.82	0.416
	2) 0.0-2.5%	4) 5.0-10.0%	-0.058	0.0336	-1.73	0.087
	2) 0.0-2.5%	5) >10.0%	-0.077**	0.0257	-2.98	0.004
	3) 2.5-5.0%	4) 5.0-10.0%	-0.088*	0.0398	-2.21	0.030
	3) 2.5-5.0%	5) >10.0%	-0.106***	0.0281	-3.79	0.000
4) 5.0-10.0%	5) >10.0%	-0.018	0.0316	-0.58	0.563	

\* Difference is significant (p<.05) \*\*Difference is significant (p<.01) \*\*\*Difference is significant (p<.001)

**Table 44. Differences in Teacher Attitudes and School Climate by School LEP (Limited English Proficient) Enrollment**

Attitudes	Percent LEP Enrollment (A)	Percent LEP Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
1) There is a great deal of cooperative effort among staff members	1) 0%	2) 0.0-2.5%	0.110***	0.0253	4.37	0.000
	1) 0%	3) 2.5-5.0%	0.033	0.0281	1.18	0.239
	1) 0%	4) 5.0-10.0%	0.032	0.0275	1.18	0.241
	1) 0%	5) >10.0%	0.007	0.0151	0.43	0.666
	2) 0.0-2.5%	3) 2.5-5.0%	-0.077*	0.0332	-2.32	0.022
	2) 0.0-2.5%	4) 5.0-10.0%	-0.078	0.0365	-2.13	0.036
	2) 0.0-2.5%	5) >10.0%	-0.104**	0.0301	-3.45	0.001
	3) 2.5-5.0%	4) 5.0-10.0%	-0.001	0.0330	-0.02	0.981
	3) 2.5-5.0%	5) >10.0%	-0.027	0.0263	-1.02	0.312
4) 5.0-10.0%	5) >10.0%	-0.026	0.0294	-0.88	0.380	
2) They are given the supports they need to teach students with special needs	1) 0%	2) 0.0-2.5%	0.141***	0.0292	4.82	0.000
	1) 0%	3) 2.5-5.0%	0.182***	0.0283	6.43	0.000
	1) 0%	4) 5.0-10.0%	0.210***	0.0298	7.05	0.000
	1) 0%	5) >10.0%	0.017	0.0217	0.81	0.423
	2) 0.0-2.5%	3) 2.5-5.0%	0.041	0.0379	1.07	0.287
	2) 0.0-2.5%	4) 5.0-10.0%	0.069	0.0389	1.78	0.079
	2) 0.0-2.5%	5) >10.0%	-0.124***	0.0335	-3.69	0.000
	3) 2.5-5.0%	4) 5.0-10.0%	0.028	0.0384	0.74	0.460
	3) 2.5-5.0%	5) >10.0%	-0.164***	0.0293	-5.60	0.000
4) 5.0-10.0%	5) >10.0%	-0.193***	0.0307	-6.28	0.000	
3) They make a conscious effort to coordinate the content of their courses with that of other teachers	1) 0%	2) 0.0-2.5%	0.051*	0.0231	2.21	0.030
	1) 0%	3) 2.5-5.0%	0.033	0.0274	1.22	0.227
	1) 0%	4) 5.0-10.0%	-0.036	0.0285	-1.25	0.215
	1) 0%	5) >10.0%	-0.067***	0.0145	-4.63	0.000
	2) 0.0-2.5%	3) 2.5-5.0%	-0.018	0.0353	-0.50	0.620
	2) 0.0-2.5%	4) 5.0-10.0%	-0.087*	0.0377	-2.29	0.024
	2) 0.0-2.5%	5) >10.0%	-0.118***	0.0258	-4.57	0.000
	3) 2.5-5.0%	4) 5.0-10.0%	-0.069	0.0379	-1.82	0.073
	3) 2.5-5.0%	5) >10.0%	-0.100***	0.0259	-3.87	0.000
4) 5.0-10.0%	5) >10.0%	-0.031	0.0298	-1.05	0.298	

Source: National Center for Education Statistics, 2003-04 Schools and Staffing Survey

**Table 45. Differences in Participation in Professional Development for Teachers in First Year of Teaching by School Level (Elementary vs. Secondary)**

Types of induction supports	Mean Diff (Elem - Sec)	Std Error	t	P>  t
1) Percent of teachers who participated in induction program during first year of teaching	-0.019	0.0165	-1.17	0.244
2) Worked closely with master or mentor teacher in first year of teaching	0.039*	0.0173	2.27	0.026
3) Master/mentor teachers in same subject area	0.019	0.0178	1.06	0.291
4) Extent master or mentor teacher helped	0.057	0.0631	0.91	0.366
5) Common planning time with teachers in their subject	0.217***	0.0173	12.53	0.000
6) Seminars or classes for beginning teachers	0.040*	0.0158	2.55	0.012
7) Regular supportive communication with principal, other administrators, or department chair	0.006	0.0139	0.44	0.664
8) Reduced teaching schedule	-0.028***	0.0069	-4.01	0.000
9) Reduced number of preparations	-0.094***	0.0103	-9.10	0.000
10) Extra classroom assistance (e.g., teacher aide)	0.096***	0.0152	6.34	0.000

\* Difference is significant ( $p < .05$ )

\*\*\*Difference is significant ( $p < .001$ )



**Table 46. Differences in Participation in Professional Development for Teachers in First Year of Teaching by School Urbanicity (1-Large town/central “urban”, 2-Urban fringe “suburban”, 3-Small town/rural)**

Types of induction supports	Urbanicity (A)	Urbanicity (B)	Mean Diff (A-B)	Std Error	t	P>  t
1) Percent of teachers who participated in induction program during first year of teaching	1) Urban	2) Suburban	-0.090***	0.0224	-4.05	0.000
	1) Urban	3) Rural	0.007	0.0258	0.28	0.783
	2) Suburban	3) Rural	0.098***	0.0181	5.40	0.000
2) Worked closely with master or mentor teacher in first year of teaching	1) Urban	2) Suburban	-0.088**	0.0255	-3.45	0.001
	1) Urban	3) Rural	-0.069*	0.0282	-2.46	0.016
	2) Suburban	3) Rural	0.019	0.0183	1.02	0.313
3) Master/mentor teachers in same subject area	1) Urban	2) Suburban	-0.010	0.0270	-0.37	0.712
	1) Urban	3) Rural	0.046	0.0289	1.60	0.113
	2) Suburban	3) Rural	0.056*	0.0247	2.28	0.025
4) Extent master or mentor teacher helped	1) Urban	2) Suburban	0.051	0.0874	0.58	0.560
	1) Urban	3) Rural	0.046	0.0946	0.48	0.631
	2) Suburban	3) Rural	-0.006	0.0845	-0.07	0.948
5) Common planning time with teachers in their subject	1) Urban	2) Suburban	0.045*	0.0189	2.37	0.020
	1) Urban	3) Rural	0.109***	0.0222	4.89	0.000
	2) Suburban	3) Rural	0.064**	0.0226	2.83	0.006
6) Seminars or classes for beginning teachers	1) Urban	2) Suburban	0.010	0.0213	0.48	0.633
	1) Urban	3) Rural	0.142***	0.0231	6.17	0.000
	2) Suburban	3) Rural	0.132***	0.0191	6.91	0.000
7) Regular supportive communication with principal, other administrators, or department chair	1) Urban	2) Suburban	-0.027	0.0169	-1.61	0.111
	1) Urban	3) Rural	-0.033	0.0203	-1.65	0.103
	2) Suburban	3) Rural	-0.006	0.0169	-0.37	0.713
8) Reduced teaching schedule	1) Urban	2) Suburban	0.012	0.0093	1.33	0.187
	1) Urban	3) Rural	0.006	0.0114	0.56	0.577
	2) Suburban	3) Rural	-0.006	0.0077	-0.78	0.435
9) Reduced number of preparations	1) Urban	2) Suburban	0.000	0.0097	0.00	1.000
	1) Urban	3) Rural	-0.020	0.0134	-1.48	0.143
	2) Suburban	3) Rural	-0.020	0.0121	-1.64	0.104
10) Extra classroom assistance (e.g., teacher aide)	1) Urban	2) Suburban	0.006	0.0228	0.25	0.804
	1) Urban	3) Rural	0.011	0.0222	0.50	0.617
	2) Suburban	3) Rural	0.005	0.0193	0.28	0.777

\* Difference is significant (p<.05) \*\*Difference is significant (p<.01) \*\*\*Difference is significant (p<.001)

**Table 47. Differences in Participation in Professional Development for Teachers in First Year of Teaching by School Minority Enrollment**

Types of induction supports	Percent Minority Enrollment (A)	Percent Minority Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
1) Percent of teachers who participated in induction program during first year of teaching	1) < 10.5%	2) 10.5-23.0%	-0.022	0.0601	-0.37	0.715
	1) < 10.5%	3) 23.0-44.6%	-0.055	0.0592	-0.92	0.360
	1) < 10.5%	4) 44.6-77.0%	0.056	0.0653	0.86	0.394
	1) < 10.5%	5) >77%	0.022	0.0654	0.33	0.741
	2) 10.5-23.0%	3) 23.0-44.6%	-0.032	0.0551	-0.59	0.557
	2) 10.5-23.0%	4) 44.6-77.0%	0.078	0.0505	1.54	0.126
	2) 10.5-23.0%	5) >77%	0.044	0.0558	0.78	0.435
	3) 23.0-44.6%	4) 44.6-77.0%	0.110	0.0605	1.83	0.071
	3) 23.0-44.6%	5) >77%	0.076	0.0584	1.31	0.195
2) Worked closely with master or mentor teacher in first year of teaching	4) 44.6-77.0%	5) >77%	-0.034	0.0581	-0.59	0.557
	1) < 10.5%	2) 10.5-23.0%	-0.094	0.0636	-1.47	0.144
	1) < 10.5%	3) 23.0-44.6%	-0.164*	0.0667	-2.46	0.016
	1) < 10.5%	4) 44.6-77.0%	-0.059	0.0618	-0.95	0.343
	1) < 10.5%	5) >77%	-0.059	0.0617	-0.96	0.341
	2) 10.5-23.0%	3) 23.0-44.6%	-0.071	0.0593	-1.19	0.236
	2) 10.5-23.0%	4) 44.6-77.0%	0.035	0.0592	0.59	0.558
	2) 10.5-23.0%	5) >77%	0.035	0.0647	0.53	0.594
	3) 23.0-44.6%	4) 44.6-77.0%	0.105	0.0584	1.81	0.074
3) master/mentor teachers in same subject area	3) 23.0-44.6%	5) >77%	0.105	0.0587	1.79	0.076
	4) 44.6-77.0%	5) >77%	0.000	0.0553	0.00	0.998
	1) < 10.5%	2) 10.5-23.0%	-0.107	0.0593	-1.81	0.074
	1) < 10.5%	3) 23.0-44.6%	-0.096	0.0582	-1.65	0.103
	1) < 10.5%	4) 44.6-77.0%	-0.035	0.0762	-0.46	0.645
	1) < 10.5%	5) >77%	-0.054	0.0726	-0.74	0.462
	2) 10.5-23.0%	3) 23.0-44.6%	0.011	0.0653	0.17	0.862
	2) 10.5-23.0%	4) 44.6-77.0%	0.072	0.0790	0.91	0.365
	2) 10.5-23.0%	5) >77%	0.054	0.0706	0.76	0.450
4) Extent master or mentor teacher helped	3) 23.0-44.6%	4) 44.6-77.0%	0.061	0.0663	0.91	0.363
	3) 23.0-44.6%	5) >77%	0.042	0.0607	0.70	0.489
	4) 44.6-77.0%	5) >77%	-0.018	0.0758	-0.24	0.809
	1) < 10.5%	2) 10.5-23.0%	0.172	0.2464	0.70	0.486
	1) < 10.5%	3) 23.0-44.6%	0.134	0.2321	0.58	0.566
	1) < 10.5%	4) 44.6-77.0%	0.309	0.2464	1.25	0.213
	1) < 10.5%	5) >77%	0.414*	0.1946	2.13	0.036
	2) 10.5-23.0%	3) 23.0-44.6%	-0.039	0.2773	-0.14	0.890
	2) 10.5-23.0%	4) 44.6-77.0%	0.136	0.2857	0.48	0.634
2) 10.5-23.0%	5) >77%	0.241	0.2635	0.92	0.363	
3) 23.0-44.6%	4) 44.6-77.0%	0.175	0.2811	0.62	0.535	
3) 23.0-44.6%	5) >77%	0.280	0.2577	1.09	0.281	
4) 44.6-77.0%	5) >77%	0.105	0.2574	0.41	0.685	

*Table continues on next page*

**Table 47. Differences in Participation in Professional Development for Teachers in First Year of Teaching by School Minority Enrollment (continued)**

Types of induction supports	Percent Minority Enrollment (A)	Percent Minority Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
5) Common planning time with teachers in their subject	1) < 10.5%	2) 10.5-23.0%	-0.021	0.0667	-0.32	0.749
	1) < 10.5%	3) 23.0-44.6%	0.085	0.0676	1.26	0.211
	1) < 10.5%	4) 44.6-77.0%	0.042	0.0657	0.64	0.522
	1) < 10.5%	5) >77%	-0.036	0.0671	-0.53	0.594
	2) 10.5-23.0%	3) 23.0-44.6%	0.107	0.0726	1.47	0.146
	2) 10.5-23.0%	4) 44.6-77.0%	0.064	0.0701	0.91	0.366
	2) 10.5-23.0%	5) >77%	-0.014	0.0734	-0.20	0.845
	3) 23.0-44.6%	4) 44.6-77.0%	-0.043	0.0641	-0.67	0.505
	3) 23.0-44.6%	5) >77%	-0.121	0.0639	-1.89	0.061
6) Seminars or classes for beginning teachers	4) 44.6-77.0%	5) >77%	-0.078	0.0634	-1.23	0.221
	1) < 10.5%	2) 10.5-23.0%	-0.141*	0.0672	-2.10	0.039
	1) < 10.5%	3) 23.0-44.6%	-0.043	0.0710	-0.61	0.542
	1) < 10.5%	4) 44.6-77.0%	-0.111	0.0627	-1.76	0.082
	1) < 10.5%	5) >77%	-0.060	0.0716	-0.83	0.406
	2) 10.5-23.0%	3) 23.0-44.6%	0.097	0.0571	1.70	0.092
	2) 10.5-23.0%	4) 44.6-77.0%	0.030	0.0519	0.58	0.562
	2) 10.5-23.0%	5) >77%	0.081	0.0560	1.45	0.151
	3) 23.0-44.6%	4) 44.6-77.0%	-0.067	0.0610	-1.10	0.274
7) Regular supportive communication with principal, other administrators, or department chair	3) 23.0-44.6%	5) >77%	-0.016	0.0547	-0.30	0.767
	4) 44.6-77.0%	5) >77%	0.051	0.0513	0.99	0.324
	1) < 10.5%	2) 10.5-23.0%	-0.044	0.0557	-0.78	0.436
	1) < 10.5%	3) 23.0-44.6%	0.034	0.0637	0.53	0.599
	1) < 10.5%	4) 44.6-77.0%	0.015	0.0554	0.27	0.786
	1) < 10.5%	5) >77%	0.041	0.0594	0.69	0.493
	2) 10.5-23.0%	3) 23.0-44.6%	0.077	0.0599	1.29	0.201
	2) 10.5-23.0%	4) 44.6-77.0%	0.059	0.0542	1.08	0.281
	2) 10.5-23.0%	5) >77%	0.084	0.0556	1.52	0.132
8) Reduced teaching schedule	3) 23.0-44.6%	4) 44.6-77.0%	-0.019	0.0710	-0.26	0.795
	3) 23.0-44.6%	5) >77%	0.007	0.0564	0.13	0.897
	4) 44.6-77.0%	5) >77%	0.026	0.0549	0.47	0.640
	1) < 10.5%	2) 10.5-23.0%	0.010	0.0205	0.48	0.630
	1) < 10.5%	3) 23.0-44.6%	0.018	0.0197	0.92	0.363
	1) < 10.5%	4) 44.6-77.0%	-0.029	0.0370	-0.77	0.443
	1) < 10.5%	5) >77%	0.018	0.0211	0.86	0.391
	2) 10.5-23.0%	3) 23.0-44.6%	0.008	0.0189	0.43	0.668
	2) 10.5-23.0%	4) 44.6-77.0%	-0.038	0.0374	-1.03	0.307
	2) 10.5-23.0%	5) >77%	0.008	0.0190	0.44	0.664
	3) 23.0-44.6%	4) 44.6-77.0%	-0.047	0.0341	-1.36	0.176
	3) 23.0-44.6%	5) >77%	0.000	0.0173	0.01	0.993
	4) 44.6-77.0%	5) >77%	0.047	0.0369	1.27	0.208

*Table continues on next page*

Source: National Center for Education Statistics, 2003-04 Schools and Staffing Survey

**Table 47. Differences in Participation in Professional Development for Teachers in First Year of Teaching by School Minority Enrollment (continued)**

Types of induction supports	Percent Minority Enrollment (A)	Percent Minority Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
9) Reduced number of preparations	1) < 10.5%	2) 10.5-23.0%	-0.030	0.0480	-0.62	0.534
	1) < 10.5%	3) 23.0-44.6%	-0.009	0.0319	-0.27	0.784
	1) < 10.5%	4) 44.6-77.0%	-0.037	0.0310	-1.19	0.238
	1) < 10.5%	5) >77%	0.019	0.0352	0.54	0.593
	2) 10.5-23.0%	3) 23.0-44.6%	0.021	0.0483	0.44	0.662
	2) 10.5-23.0%	4) 44.6-77.0%	-0.007	0.0512	-0.13	0.894
	2) 10.5-23.0%	5) >77%	0.049	0.0545	0.90	0.373
	3) 23.0-44.6%	4) 44.6-77.0%	-0.028	0.0392	-0.72	0.476
	3) 23.0-44.6%	5) >77%	0.028	0.0415	0.67	0.507
10) Extra classroom assistance (e.g., teacher aide)	4) 44.6-77.0%	5) >77%	0.056	0.0363	1.53	0.129
	1) < 10.5%	2) 10.5-23.0%	0.032	0.0518	0.62	0.535
	1) < 10.5%	3) 23.0-44.6%	-0.003	0.0585	-0.04	0.966
	1) < 10.5%	4) 44.6-77.0%	-0.060	0.0638	-0.94	0.352
	1) < 10.5%	5) >77%	-0.141*	0.0660	-2.14	0.035
	2) 10.5-23.0%	3) 23.0-44.6%	-0.035	0.0500	-0.70	0.488
	2) 10.5-23.0%	4) 44.6-77.0%	-0.092	0.0515	-1.78	0.078
	2) 10.5-23.0%	5) >77%	-0.173**	0.0608	-2.85	0.005
	3) 23.0-44.6%	4) 44.6-77.0%	-0.057	0.0585	-0.98	0.332
3) 23.0-44.6%	5) >77%	-0.139*	0.0607	-2.28	0.025	
4) 44.6-77.0%	5) >77%	-0.081	0.0572	-1.42	0.158	

\* Difference is significant (p<.05) \*\*Difference is significant (p<.01) \*\*\*Difference is significant (p<.001)

**Table 48. Differences in Participation in Professional Development for Teachers  
in First Year of Teaching by School Poverty  
(Percent of Students Enrolled in the Free and Reduced Lunch Program - FRL)**

<b>Types of induction supports</b>	<b>Percent FRL Enrollment (A)</b>	<b>Percent FRL Enrollment (B)</b>	<b>Mean Diff (A-B)</b>	<b>Std Error</b>	<b>t</b>	<b>P&gt;  t  </b>
1) Percent of teachers who participated in induction program during first year of teaching	1) <17.31%	2) 17.32-34.34%	0.046	0.0249	1.83	0.071
	1) <17.31%	3) 34.35-53.84%	0.090***	0.0238	3.78	0.000
	1) <17.31%	4) > 53.85%	0.105***	0.0249	4.22	0.000
	2) 17.32-34.34%	3) 34.35-53.84%	0.045	0.0228	1.95	0.054
	2) 17.32-34.34%	4) > 53.85%	0.060	0.0217	2.76	0.007
	3) 34.35-53.84%	4) > 53.85%	0.015	0.0250	0.61	0.544
2) Worked closely with master or mentor teacher in first year of teaching	1) <17.31%	2) 17.32-34.34%	-0.019	0.0218	-0.89	0.377
	1) <17.31%	3) 34.35-53.84%	-0.002	0.0243	-0.10	0.924
	1) <17.31%	4) > 53.85%	0.044*	0.0207	2.12	0.037
	2) 17.32-34.34%	3) 34.35-53.84%	0.017	0.0239	0.71	0.478
	2) 17.32-34.34%	4) > 53.85%	0.063**	0.0234	2.70	0.008
	3) 34.35-53.84%	4) > 53.85%	0.046*	0.0231	2.00	0.049
3) master/mentor teachers in same subject area	1) <17.31%	2) 17.32-34.34%	0.024	0.0297	0.81	0.419
	1) <17.31%	3) 34.35-53.84%	0.025	0.0272	0.92	0.358
	1) <17.31%	4) > 53.85%	0.052	0.0284	1.84	0.070
	2) 17.32-34.34%	3) 34.35-53.84%	0.001	0.0250	0.04	0.967
	2) 17.32-34.34%	4) > 53.85%	0.028	0.0290	0.97	0.335
	3) 34.35-53.84%	4) > 53.85%	0.027	0.0296	0.91	0.364
4) Extent master or mentor teacher helped	1) <17.31%	2) 17.32-34.34%	0.067	0.1052	0.64	0.525
	1) <17.31%	3) 34.35-53.84%	0.047	0.1011	0.46	0.643
	1) <17.31%	4) > 53.85%	-0.069	0.1068	-0.65	0.520
	2) 17.32-34.34%	3) 34.35-53.84%	-0.020	0.0963	-0.21	0.835
	2) 17.32-34.34%	4) > 53.85%	-0.136	0.0937	-1.45	0.150
	3) 34.35-53.84%	4) > 53.85%	-0.116	0.0937	-1.24	0.219
5) Common planning time with teachers in their subject	1) <17.31%	2) 17.32-34.34%	0.009	0.0263	0.35	0.730
	1) <17.31%	3) 34.35-53.84%	-0.040	0.0239	-1.69	0.095
	1) <17.31%	4) > 53.85%	-0.095***	0.0247	-3.86	0.000
	2) 17.32-34.34%	3) 34.35-53.84%	-0.050*	0.0247	-2.00	0.048
	2) 17.32-34.34%	4) > 53.85%	-0.105***	0.0245	-4.26	0.000
	3) 34.35-53.84%	4) > 53.85%	-0.055*	0.0252	-2.18	0.032
6) Seminars or classes for beginning teachers	1) <17.31%	2) 17.32-34.34%	-0.021	0.0221	-0.97	0.334
	1) <17.31%	3) 34.35-53.84%	-0.023	0.0238	-0.95	0.347
	1) <17.31%	4) > 53.85%	-0.027	0.0205	-1.34	0.184
	2) 17.32-34.34%	3) 34.35-53.84%	-0.001	0.0197	-0.06	0.956
	2) 17.32-34.34%	4) > 53.85%	-0.006	0.0217	-0.28	0.783
	3) 34.35-53.84%	4) > 53.85%	-0.005	0.0226	-0.22	0.828

*Table continues on next page*

Source: National Center for Education Statistics, 2003-04 Schools and Staffing Survey

**Table 48. Differences in Participation in Professional Development for Teachers  
in First Year of Teaching by School Poverty  
(Percent of Students Enrolled in the Free and Reduced Lunch Program - FRL) (continued)**

<b>Types of induction supports</b>	<b>Percent FRL Enrollment (A)</b>	<b>Percent FRL Enrollment (B)</b>	<b>Mean Diff (A-B)</b>	<b>Std Error</b>	<b>t</b>	<b>P&gt;  t  </b>
7) Regular supportive communication with principal, other administrators, or department chair	1) <17.31%	2) 17.32-34.34%	0.015	0.0199	0.77	0.444
	1) <17.31%	3) 34.35-53.84%	0.000	0.0220	-0.02	0.986
	1) <17.31%	4) > 53.85%	0.029	0.0199	1.47	0.145
	2) 17.32-34.34%	3) 34.35-53.84%	-0.016	0.0218	-0.72	0.474
	2) 17.32-34.34%	4) > 53.85%	0.014	0.0171	0.82	0.416
	3) 34.35-53.84%	4) > 53.85%	0.030	0.0206	1.44	0.154
8) Reduced teaching schedule	1) <17.31%	2) 17.32-34.34%	-0.002	0.0107	-0.17	0.863
	1) <17.31%	3) 34.35-53.84%	-0.004	0.0092	-0.44	0.659
	1) <17.31%	4) > 53.85%	-0.012	0.0103	-1.22	0.227
	2) 17.32-34.34%	3) 34.35-53.84%	-0.002	0.0090	-0.25	0.807
	2) 17.32-34.34%	4) > 53.85%	-0.011	0.0101	-1.05	0.296
	3) 34.35-53.84%	4) > 53.85%	-0.008	0.0088	-0.96	0.339
9) Reduced number of preparations	1) <17.31%	2) 17.32-34.34%	-0.007	0.0124	-0.59	0.557
	1) <17.31%	3) 34.35-53.84%	-0.002	0.0111	-0.22	0.828
	1) <17.31%	4) > 53.85%	0.010	0.0109	0.91	0.367
	2) 17.32-34.34%	3) 34.35-53.84%	0.005	0.0112	0.44	0.662
	2) 17.32-34.34%	4) > 53.85%	0.017	0.0109	1.58	0.119
	3) 34.35-53.84%	4) > 53.85%	0.012	0.0108	1.14	0.259
10) Extra classroom assistance (e.g., teacher aide)	1) <17.31%	2) 17.32-34.34%	0.031	0.0250	1.22	0.224
	1) <17.31%	3) 34.35-53.84%	-0.009	0.0276	-0.34	0.736
	1) <17.31%	4) > 53.85%	-0.070*	0.0267	-2.64	0.010
	2) 17.32-34.34%	3) 34.35-53.84%	-0.040	0.0208	-1.92	0.058
	2) 17.32-34.34%	4) > 53.85%	-0.101***	0.0251	-4.03	0.000
	3) 34.35-53.84%	4) > 53.85%	-0.061*	0.0251	-2.43	0.017

\* Difference is significant (p<.05) \*\*Difference is significant (p<.01) \*\*\*Difference is significant (p<.001)

**Table 49. Differences in Participation in Professional Development for Teachers in First Year of Teaching by School LEP (Limited English Proficient) Enrollment**

Types of induction supports	Percent LEP Enrollment (A)	Percent LEP Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
1) Percent of teachers who participated in induction program during first year of teaching	1) 0%	2) 0.0-2.5%	-0.090**	0.0254	-3.54	0.001
	1) 0%	3) 2.5-5.0%	-0.016	0.0362	-0.43	0.665
	1) 0%	4) 5.0-10.0%	0.013	0.0440	0.30	0.768
	1) 0%	5) >10.0%	0.026	0.0226	1.16	0.250
	2) 0.0-2.5%	3) 2.5-5.0%	0.074	0.0397	1.87	0.065
	2) 0.0-2.5%	4) 5.0-10.0%	0.103*	0.0452	2.28	0.025
	2) 0.0-2.5%	5) >10.0%	0.116***	0.0237	4.91	0.000
	3) 2.5-5.0%	4) 5.0-10.0%	0.029	0.0533	0.54	0.591
	3) 2.5-5.0%	5) >10.0%	0.042	0.0388	1.08	0.283
	4) 5.0-10.0%	5) >10.0%	0.013	0.0418	0.31	0.754
2) Worked closely with master or mentor teacher in first year of teaching	1) 0%	2) 0.0-2.5%	0.003	0.0273	0.11	0.916
	1) 0%	3) 2.5-5.0%	0.059	0.0334	1.77	0.081
	1) 0%	4) 5.0-10.0%	-0.007	0.0330	-0.20	0.841
	1) 0%	5) >10.0%	-0.010	0.0182	-0.55	0.583
	2) 0.0-2.5%	3) 2.5-5.0%	0.056	0.0389	1.44	0.153
	2) 0.0-2.5%	4) 5.0-10.0%	-0.010	0.0375	-0.25	0.800
	2) 0.0-2.5%	5) >10.0%	-0.013	0.0289	-0.45	0.655
	3) 2.5-5.0%	4) 5.0-10.0%	-0.066	0.0422	-1.56	0.123
	3) 2.5-5.0%	5) >10.0%	-0.069*	0.0342	-2.02	0.047
	4) 5.0-10.0%	5) >10.0%	-0.003	0.0336	-0.10	0.919
3) Master/mentor teachers in same subject area	1) 0%	2) 0.0-2.5%	0.012	0.0406	0.30	0.761
	1) 0%	3) 2.5-5.0%	-0.043	0.0379	-1.13	0.260
	1) 0%	4) 5.0-10.0%	0.030	0.0371	0.82	0.413
	1) 0%	5) >10.0%	-0.017	0.0260	-0.66	0.512
	2) 0.0-2.5%	3) 2.5-5.0%	-0.055	0.0498	-1.11	0.270
	2) 0.0-2.5%	4) 5.0-10.0%	0.018	0.0511	0.35	0.724
	2) 0.0-2.5%	5) >10.0%	-0.029	0.0399	-0.74	0.462
	3) 2.5-5.0%	4) 5.0-10.0%	0.073	0.0501	1.46	0.147
	3) 2.5-5.0%	5) >10.0%	0.026	0.0427	0.60	0.547
	4) 5.0-10.0%	5) >10.0%	-0.048	0.0418	-1.14	0.257
4) Extent master or mentor teacher helped	1) 0%	2) 0.0-2.5%	0.107	0.1056	1.01	0.316
	1) 0%	3) 2.5-5.0%	-0.300**	0.1109	-2.71	0.008
	1) 0%	4) 5.0-10.0%	0.143	0.1435	1.00	0.321
	1) 0%	5) >10.0%	0.182*	0.0896	2.03	0.046
	2) 0.0-2.5%	3) 2.5-5.0%	-0.407**	0.1330	-3.06	0.003
	2) 0.0-2.5%	4) 5.0-10.0%	0.037	0.1597	0.23	0.819
	2) 0.0-2.5%	5) >10.0%	0.075	0.1091	0.69	0.494
	3) 2.5-5.0%	4) 5.0-10.0%	0.443**	0.1644	2.70	0.008
	3) 2.5-5.0%	5) >10.0%	0.482***	0.1223	3.94	0.000
	4) 5.0-10.0%	5) >10.0%	0.038	0.1505	0.25	0.800

*Table continues on next page*

Source: National Center for Education Statistics, 2003-04 Schools and Staffing Survey

**Table 49. Differences in Participation in Professional Development for Teachers in First Year of Teaching by School LEP (Limited English Proficient) Enrollment (continued)**

Types of induction supports	Percent LEP Enrollment (A)	Percent Minority Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
5) Common planning time with teachers in their subject	1) 0%	2) 0.0-2.5%	0.144***	0.0292	4.93	0.000
	1) 0%	3) 2.5-5.0%	0.012	0.0425	0.28	0.783
	1) 0%	4) 5.0-10.0%	-0.030	0.0372	-0.82	0.415
	1) 0%	5) >10.0%	-0.001	0.0218	-0.03	0.977
	2) 0.0-2.5%	3) 2.5-5.0%	-0.132**	0.0493	-2.68	0.009
	2) 0.0-2.5%	4) 5.0-10.0%	-0.174***	0.0410	-4.26	0.000
	2) 0.0-2.5%	5) >10.0%	-0.144***	0.0333	-4.34	0.000
	3) 2.5-5.0%	4) 5.0-10.0%	-0.042	0.0511	-0.83	0.411
	3) 2.5-5.0%	5) >10.0%	-0.012	0.0456	-0.27	0.787
4) 5.0-10.0%	5) >10.0%	0.030	0.0403	0.74	0.461	
6) Seminars or classes for beginning teachers	1) 0%	2) 0.0-2.5%	-0.041	0.0289	-1.42	0.158
	1) 0%	3) 2.5-5.0%	-0.015	0.0391	-0.39	0.697
	1) 0%	4) 5.0-10.0%	-0.026	0.0341	-0.75	0.455
	1) 0%	5) >10.0%	-0.027	0.0170	-1.59	0.115
	2) 0.0-2.5%	3) 2.5-5.0%	0.026	0.0439	0.59	0.558
	2) 0.0-2.5%	4) 5.0-10.0%	0.016	0.0415	0.37	0.709
	2) 0.0-2.5%	5) >10.0%	0.014	0.0289	0.48	0.629
	3) 2.5-5.0%	4) 5.0-10.0%	-0.010	0.0454	-0.23	0.821
	3) 2.5-5.0%	5) >10.0%	-0.012	0.0405	-0.29	0.771
4) 5.0-10.0%	5) >10.0%	-0.002	0.0346	-0.04	0.965	
7) Regular supportive communication with principal, other administrators, or department chair	1) 0%	2) 0.0-2.5%	0.039	0.0265	1.47	0.146
	1) 0%	3) 2.5-5.0%	0.022	0.0252	0.89	0.376
	1) 0%	4) 5.0-10.0%	0.009	0.0225	0.38	0.702
	1) 0%	5) >10.0%	0.044*	0.0195	2.24	0.028
	2) 0.0-2.5%	3) 2.5-5.0%	-0.016	0.0327	-0.50	0.617
	2) 0.0-2.5%	4) 5.0-10.0%	-0.030	0.0326	-0.93	0.356
	2) 0.0-2.5%	5) >10.0%	0.005	0.0297	0.16	0.875
	3) 2.5-5.0%	4) 5.0-10.0%	-0.014	0.0346	-0.40	0.691
	3) 2.5-5.0%	5) >10.0%	0.021	0.0291	0.73	0.470
4) 5.0-10.0%	5) >10.0%	0.035	0.0280	1.25	0.216	
8) Reduced teaching schedule	1) 0%	2) 0.0-2.5%	0.000	0.0111	-0.04	0.970
	1) 0%	3) 2.5-5.0%	0.015	0.0109	1.42	0.159
	1) 0%	4) 5.0-10.0%	0.014	0.0112	1.22	0.228
	1) 0%	5) >10.0%	-0.007	0.0101	-0.71	0.482
	2) 0.0-2.5%	3) 2.5-5.0%	0.016	0.0125	1.27	0.209
	2) 0.0-2.5%	4) 5.0-10.0%	0.014	0.1386	1.02	0.313
	2) 0.0-2.5%	5) >10.0%	-0.007	0.0115	-0.58	0.561
	3) 2.5-5.0%	4) 5.0-10.0%	-0.002	0.0136	-0.13	0.895
	3) 2.5-5.0%	5) >10.0%	-0.023	0.0116	-1.94	0.056
4) 5.0-10.0%	5) >10.0%	-0.021*	0.0104	-2.00	0.049	

*Table continues on next page*



**Table 49. Differences in Participation in Professional Development for Teachers in First Year of Teaching by School LEP (Limited English Proficient) Enrollment (continued)**

Types of induction supports	Percent LEP Enrollment (A)	Percent LEP Enrollment (B)	Mean Diff (A-B)	Std Error	t	P>  t
9) Reduced number of preparations	1) 0%	2) 0.0-2.5%	-0.023	0.0167	-1.36	0.178
	1) 0%	3) 2.5-5.0%	0.015	0.0140	1.10	0.275
	1) 0%	4) 5.0-10.0%	0.002	0.0182	0.12	0.908
	1) 0%	5) >10.0%	0.023*	0.0094	2.50	0.014
	2) 0.0-2.5%	3) 2.5-5.0%	0.038	0.0203	1.87	0.065
	2) 0.0-2.5%	4) 5.0-10.0%	0.025	0.0223	1.11	0.269
	2) 0.0-2.5%	5) >10.0%	0.046**	0.0170	2.72	0.008
	3) 2.5-5.0%	4) 5.0-10.0%	-0.013	0.0235	-0.56	0.574
	3) 2.5-5.0%	5) >10.0%	0.008	0.0160	0.50	0.616
4) 5.0-10.0%	5) >10.0%	0.008	0.0160	0.50	0.616	
10) Extra classroom assistance (e.g., teacher aide)	1) 0%	2) 0.0-2.5%	0.096**	0.0269	3.55	0.001
	1) 0%	3) 2.5-5.0%	0.032	0.0380	0.84	0.405
	1) 0%	4) 5.0-10.0%	0.001	0.0298	0.03	0.975
	1) 0%	5) >10.0%	-0.077***	0.0195	-3.95	0.000
	2) 0.0-2.5%	3) 2.5-5.0%	-0.064	0.0434	-1.47	0.145
	2) 0.0-2.5%	4) 5.0-10.0%	-0.095**	0.0339	-2.80	0.006
	2) 0.0-2.5%	5) >10.0%	-0.173***	0.0318	-5.42	0.000
	3) 2.5-5.0%	4) 5.0-10.0%	-0.031	0.0437	-0.71	0.482
	3) 2.5-5.0%	5) >10.0%	-0.109**	0.0381	-2.85	0.005
4) 5.0-10.0%	5) >10.0%	-0.078*	0.0306	-2.54	0.013	

\* Difference is significant (p<.05) \*\*Difference is significant (p<.01) \*\*\*Difference is significant (p<.001)



**Appendix C**  
**Results from the 2007-08**  
**Standards Assessment Inventory**  
**(NATIONAL STAFF DEVELOPMENT COUNCIL)**

## The National Staff Development Council's Standards Assessment Inventory

Scale: 1=Never; 2=Seldom; 3=Sometimes; 4=Frequently; 5=Always

1. Our principal believes teacher learning is essential for achieving our school goals.
2. Fellow teachers, trainers, facilitators, and/or consultants are available to help us implement new instructional practices at our school.
3. We design evaluations of our professional development activities prior to the professional development program or set of activities.
4. Our school uses educational research to select programs.
5. We have opportunities to practice new skills gained during staff development.
6. Our faculty learns about effective ways to work together.
7. Teachers are provided opportunities to gain deep understanding of the subjects they teach.
8. Teachers are provided opportunities to learn how to involve families in their children's education.
9. The teachers in my school meet as a whole staff to discuss ways to improve teaching and learning.
10. Our principal's decisions on school-wide issues and practices are influenced by faculty input.
11. Teachers at our school have opportunities to learn how to use technology to enhance instruction.
12. Teachers at our school learn how to use data to assess student learning needs.
13. We use several sources to evaluate the effectiveness of our professional development on student learning (e.g. classroom observations, teacher surveys, conversations with principals or coaches).
14. We make decisions about professional development based on research that shows evidence of improved student performance.
15. At our school teacher learning is supported through a combination of strategies (e.g. workshops, peer coaching, study groups, joint planning of lessons, and examination of student work).
16. We receive support implementing new skills until they become a natural part of instruction.
  
17. The professional development that I participate in models instructional strategies that I will use in my classroom.
18. Our principal is committed to providing teachers with opportunities to improve instruction (e.g. observations, feedback, collaborating with colleagues).
19. Substitutes are available to cover our classes when we observe each others' classes or engage in other professional development opportunities.
20. We set aside time to discuss what we learned from our professional development experiences.
21. When deciding which school improvement efforts to adopt, we look at evidence of effectiveness of programs in other schools.
22. We design improvement strategies based on clearly stated outcomes for teacher and student learning.
23. My school structures time for teachers to work together to enhance student learning.
24. At our school, we adjust instruction and assessment to meet the needs of diverse learners.
25. We use research-based instructional strategies.
26. Teachers at our school determine the effectiveness of our professional development by using data on student improvement.
27. Our professional development promotes deep understanding of a topic.
28. Our school's teaching and learning goals depend on staff's ability to work well together.
29. We observe each other's classroom instruction as one way to improve our teaching.
30. At our school, evaluations of professional development outcomes are used to plan for professional development choices.
31. Communicating our school mission and goals to families and community members is a priority.
32. Beginning teachers have opportunities to work with more experienced teachers at our school.
33. Teachers show respect for all of the student sub-populations in our school (e.g. poor, minority).
34. We receive feedback from our colleagues about classroom practices.
35. In our school we find creative ways to expand human and material resources.
36. When considering school improvement programs we ask whether the program has resulted in student achievement gains.

*Continued on next page*

37. Teachers at our school expect high academic achievement for all of our students.
38. Teacher professional development is part of our school improvement plan.
39. Teachers use student data to plan professional development programs.
40. School leaders work with community members to help students achieve academic goals.
  
41. The school improvement programs we adopt have been effective with student populations similar to ours.
42. At my school, teachers learn through a variety of methods (e.g. hands-on activities, discussion, dialogue, writing, demonstrations, practice with feedback, group problem solving).
43. Our school leaders encourage sharing responsibility to achieve school goals.
44. We are focused on creating positive relationships between teachers and students.
45. Our principal fosters a school culture that is focused on instructional improvement.
46. Teachers use student data when discussing instruction and curriculum.
47. Our principal models how to build relationships with students' families.
48. I would use the word, empowering, to describe my principal.
49. School goals determine how resources are allocated.
50. Teachers analyze classroom data with each other to improve student learning.
51. We use students' classroom performance to assess the success of teachers' professional development experiences.
52. Teachers' prior knowledge and experience are taken into consideration when designing staff development at our school.
53. At our school, teachers can choose the types of professional development they receive (e.g. study group, action research, observations).
54. Our school's professional development helps me learn about effective student assessment techniques.
55. Teachers work with families to help them support students' learning at home.
56. Teachers examine student work with each other.
57. When we adopt school improvement initiatives we stay with them long enough to see if changes in instructional practice and student performance occur.
58. Our principal models effective collaboration.
59. Teachers receive training on curriculum and instruction for students at different levels of learning.
60. Our administrators engage teachers in conversations about instruction and student learning.

**Table 1: Teacher Professional Development in Georgia, Arizona, Alabama, and Missouri**

Question	Mean	Never	Seldom	Sometimes	Frequently	Always	Frequently + Always	N
<b>FACTOR 1 - OPPORTUNITIES FOR PROFESSIONAL DEVELOPMENT &amp; COLLABORATION</b>								
7. Teachers are provided opportunities to gain deep understanding of the subjects they teach.	2.89	1.7	7.2	22.7	37.8	30.7	<b>68.5</b>	50986
2. Fellow teachers, trainers, facilitators, and/or consultants are available to help us implement new instructional practices at our school.	3.15	0.4	3.1	17.0	40.2	39.3	<b>79.5</b>	51203
6. Our faculty learns about effective ways to work together.	2.92	1.8	6.9	21.4	37.5	32.5	<b>70.0</b>	51061
16. We receive support implementing new skills until they become a natural part of instruction.	2.69	2.4	9.9	27.4	36.7	23.5	<b>60.3</b>	50876
5. We have opportunities to practice new skills gained during staff development.	3.10	0.8	4.2	17.8	38.5	38.6	<b>77.1</b>	51064
8. Teachers are provided opportunities to learn how to involve families in their children's education.	2.63	2.4	11.3	29.8	33.7	22.7	<b>56.4</b>	51037
11. Teachers at our school have opportunities to learn how to use technology to enhance instruction.	2.93	0.9	5.4	23.1	40.8	29.8	<b>70.6</b>	51071
15. At our school teacher learning is supported through a combination of strategies (e.g. workshops, peer coaching, study groups, joint planning of lessons, and examination of student work).	3.06	1.0	5.7	17.2	38.1	38.0	<b>76.1</b>	50965
9. The teachers in my school meet as a whole staff to discuss ways to improve teaching and learning.	2.91	2.3	8.2	20.4	34.8	34.3	<b>69.1</b>	51086
20. We set aside time to discuss what we learned from our professional development experiences.	2.57	4.2	12.3	28.2	32.8	22.5	<b>55.3</b>	50814
13. We use several sources to evaluate the effectiveness of our professional development on student learning (e.g. classroom observations, teacher surveys, conversations with principals or coaches).	2.99	1.2	6.1	19.3	39.1	34.3	<b>73.4</b>	50924
12. Teachers at our school learn how to use data to assess student learning needs.	3.02	0.7	4.3	20.0	42.3	32.8	<b>75.0</b>	51009
3. We design evaluations of our professional development activities prior to the professional development program or set of activities.	2.60	6.7	10.8	24.3	32.6	25.7	<b>58.2</b>	50762
17. The professional development that I participate in models instructional strategies that I will use in my classroom.	2.91	1.2	5.5	22.6	42.4	28.2	<b>70.6</b>	50756
23. My school structures time for teachers to work together to enhance student learning.	2.87	2.1	8.4	22.0	34.9	32.6	<b>67.5</b>	50871
19. Substitutes are available to cover our classes when we observe each others' classes or engage in other professional development opportunities.	2.58	7.0	13.3	23.8	27.0	29.0	<b>56.0</b>	50874
29. We observe each other's classroom instruction as one way to improve our teaching.	2.15	10.1	19.4	31.0	24.1	15.5	<b>39.5</b>	50763
27. Our professional development promotes deep understanding of a topic.	2.76	1.7	7.8	27.7	38.6	24.2	<b>62.8</b>	50753
34. We receive feedback from our colleagues about classroom practices.	2.61	3.0	10.8	29.6	35.1	21.5	<b>56.6</b>	50781
14. We make decisions about professional development based on research that shows evidence of improved student performance.	2.97	1.3	5.0	20.6	41.7	31.4	<b>73.1</b>	50852
<b>FACTOR 1 AVERAGE</b>	<b>2.82</b>						<b>65.8</b>	

Question	Mean	Never	Seldom	Sometimes	Frequently	Always	Frequently + Always	N
	ALL FOUR STATES (GA, AZ, AL, MO)							
<b>FACTOR 2 - SCHOOL LEADERSHIP</b>								
48. I would use the word, empowering, to describe my principal.	2.97	4.6	6.7	17.6	29.0	42.1	71.1	50535
58. Our principal models effective collaboration.	3.03	3.0	6.1	17.2	32.2	41.6	73.8	50417
47. Our principal models how to build relationships with students' families.	2.97	3.0	7.2	19.1	31.6	39.1	70.7	50538
45. Our principal fosters a school culture that is focused on instructional improvement.	3.40	1.0	2.4	9.4	29.8	57.3	87.1	50689
10. Our principal's decisions on school-wide issues and practices are influenced by faculty input.	2.90	2.5	7.2	20.5	37.4	32.5	69.9	51073
18. Our principal is committed to providing teachers with opportunities to improve instruction (e.g. observations, feedback, collaborating with colleagues).	3.23	1.1	4.2	13.4	32.6	48.6	81.2	50904
60. Our administrators engage teachers in conversations about instruction and student learning.	3.06	1.8	5.4	17.2	36.3	39.3	75.6	50433
1. Our principal believes teacher learning is essential for achieving our school goals.	3.62	0.2	0.9	5.4	23.7	69.9	93.5	51203
43. Our school leaders encourage sharing responsibility to achieve school goals.	3.17	1.2	3.9	14.5	37.6	42.8	80.4	50698
49. School goals determine how resources are allocated.	2.92	1.7	5.4	22.3	39.9	30.6	70.6	50205
FACTOR 2 AVERAGE	<b>3.13</b>						<b>77.4</b>	
<b>FACTOR 3 - EQUITY</b>								
33. Teachers show respect for all of the student sub-populations in our school (e.g. poor, minority).	3.43	0.3	1.6	9.8	31.1	57.2	88.3	50900
37. Teachers at our school expect high academic achievement for all of our students.	3.39	0.3	1.8	10.9	32.6	54.4	87.0	50843
44. We are focused on creating positive relationships between teachers and students.	3.40	0.4	2.0	9.8	32.2	55.6	87.8	50703
55. Teachers work with families to help them support students' learning at home.	2.89	1.1	6.4	23.8	39.5	29.2	68.7	50478
24. At our school, we adjust instruction and assessment to meet the needs of diverse learners.	3.17	0.5	3.1	15.2	41.2	40.0	81.2	50846
46. Teachers use student data when discussing instruction and curriculum.	3.16	0.5	2.9	16.1	41.3	39.2	80.5	50567
35. In our school we find creative ways to expand human and material resources.	2.96	1.1	5.0	21.8	41.1	30.9	72.0	50761
38. Teacher professional development is part of our school improvement plan.	3.44	0.5	1.7	8.9	31.3	57.6	88.9	50656
31. Communicating our school mission and goals to families and community members is a priority.	3.10	1.2	5.3	17.5	34.5	41.5	76.0	50868
FACTOR 3 AVERAGE	<b>3.22</b>						<b>81.2</b>	

Source: National Staff Development Council Survey, 2007-08

Question	Mean	Never	Seldom	Sometimes	Frequently	Always	Frequently + Always	N
	ALL FOUR STATES (GA, AZ, AL, MO)							
<b>FACTOR 4 - TEACHER INFLUENCE &amp; COLLABORATION</b>								
53. At our school, teachers can choose the types of professional development they receive (e.g. study group, action research, observations).	2.40	6.5	14.6	29.8	30.2	18.8	49.0	50453
56. Teachers examine student work with each other.	2.58	2.4	10.8	32.0	35.3	19.4	54.7	50396
52. Teachers' prior knowledge and experience are taken into consideration when designing staff development at our school.	2.72	2.8	8.5	26.6	38.1	24.0	62.2	50334
51. We use students' classroom performance to assess the success of teachers' professional development experiences.	2.71	2.2	8.0	28.0	39.9	21.9	61.9	50296
54. Our school's professional development helps me learn about effective student assessment techniques.	2.72	2.0	7.9	29.1	37.6	23.3	61.0	50409
<b>FACTOR 4 AVERAGE</b>	<b>2.63</b>						<b>57.7</b>	
<b>ITEMS WITH NO FACTOR LOADINGS</b>								
4. Our school uses educational research to select programs.	3.16	0.7	3.1	16.2	39.8	40.2	80.0	50939
21. When deciding which school improvement efforts to adopt, we look at evidence of effectiveness of programs in other schools.	2.85	1.6	5.8	24.7	42.1	25.9	68.0	50702
22. We design improvement strategies based on clearly stated outcomes for teacher and student learning.	3.03	0.9	4.0	19.3	43.3	32.6	75.9	50692
25. We use research-based instructional strategies.	3.23	0.4	1.9	13.6	42.6	41.6	84.2	50761
26. Teachers at our school determine the effectiveness of our professional development by using data on student improvement.	2.91	1.6	6.0	22.0	40.1	30.2	70.4	50698
28. Our school's teaching and learning goals depend on staff's ability to work well together.	2.95	1.7	5.3	20.8	40.4	31.8	72.2	50570
30. At our school, evaluations of professional development outcomes are used to plan for professional development choices.	2.67	3.5	9.5	27.3	36.3	23.4	59.7	50404
32. Beginning teachers have opportunities to work with more experienced teachers at our school.	3.03	1.5	6.4	19.1	33.0	39.9	72.9	50841
36. When considering school improvement programs we ask whether the program has resulted in student achievement gains.	3.09	1.2	3.8	17.3	40.5	37.2	77.7	50618
39. Teachers use student data to plan professional development programs.	3.01	1.6	5.1	19.3	39.1	34.9	74.0	50534
40. School leaders work with community members to help students achieve academic goals.	2.73	2.3	9.2	27.0	35.9	25.7	61.5	50513
41. The school improvement programs we adopt have been effective with student populations similar to ours.	2.90	0.7	3.1	25.1	48.0	23.1	71.1	50075
42. At my school, teachers learn through a variety of methods (e.g. hands-on activities, discussion, dialogue, writing, demonstrations, practice with feedback, group problem solving).	3.09	0.9	5.0	17.2	37.9	39.0	77.0	50718
50. Teachers analyze classroom data with each other to improve student learning.	2.94	1.5	6.1	21.0	39.6	31.9	71.5	50446
57. When we adopt school improvement initiatives we stay with them long enough to see if changes in instructional practice and student performance occur.	2.75	2.6	8.1	25.9	38.1	25.3	63.3	50128
59. Teachers receive training on curriculum and instruction for students at different levels of learning.	2.86	1.6	7.0	23.9	39.1	28.3	67.4	50386

Source: National Staff Development Council Survey, 2007-08



**Table 2: Teacher Professional Development by Urbanicity**

Question	URBAN SCHOOLS/DISTRICTS								NON-URBAN SCHOOLS/DISTRICTS							
	Mean	Never	Seldom	Sometimes	Frequently	Always	Frequently + Always	N	Mean	Never	Seldom	Sometimes	Frequently	Always	Frequently + Always	N
<b>FACTOR 1 - OPPORTUNITIES FOR PROFESSIONAL DEVELOPMENT &amp; COLLABORATION</b>																
7. Teachers are provided opportunities to gain deep understanding of the subjects they teach.	2.88	1.8	7.2	22.9	37.0	31.1	<b>68.1</b>	11630	2.89	1.7	7.3	22.6	37.9	30.5	<b>68.4</b>	51959
2. Fellow teachers, trainers, facilitators, and/or consultants are available to help us implement new instructional practices at our school.	3.13	0.4	3.4	17.5	40.4	38.3	<b>78.7</b>	11677	3.14	0.4	3.3	17.4	39.7	39.1	<b>78.9</b>	52185
6. Our faculty learns about effective ways to work together.	2.90	2.1	7.2	21.5	36.9	32.2	<b>69.2</b>	11638	2.91	1.8	7.2	21.7	37.2	32.1	<b>69.3</b>	52037
16. We receive support implementing new skills until they become a natural part of instruction.	2.68	2.7	10.3	27.1	36.4	23.5	<b>59.9</b>	11616	2.67	2.5	10.5	27.8	36.1	23.0	<b>59.1</b>	51824
5. We have opportunities to practice new skills gained during staff development.	<b>3.06</b>	0.9	4.8	19.0	38.2	37.0	<b>75.2</b>	11651	<b>3.09</b>	0.9	4.3	18.0	38.2	38.5	<b>76.7</b>	52029
8. Teachers are provided opportunities to learn how to involve families in their children's education.	2.61	2.5	12.2	30.1	32.3	22.8	<b>55.1</b>	11642	2.61	2.6	11.6	30.3	33.4	22.1	<b>55.5</b>	52006
11. Teachers at our school have opportunities to learn how to use technology to enhance instruction.	2.91	1.0	5.7	24.0	40.1	29.2	<b>69.3</b>	11660	2.92	1.0	5.8	23.2	40.2	29.9	<b>70.0</b>	52044
15. At our school teacher learning is supported through a combination of strategies (e.g. workshops, peer coaching, study groups, joint planning of lessons, and examination of student work).	3.05	1.0	6.2	17.6	37.4	37.9	<b>75.2</b>	11621	3.05	1.2	6.0	17.4	37.6	37.8	<b>75.4</b>	51951

Differences between urban and non-urban schools significant at .001 level

Source: National Staff Development Council Survey, 2007-08

Question	URBAN SCHOOLS/DISTRICTS								NON-URBAN SCHOOLS/DISTRICTS							
	Mean	Never	Seldom	Sometimes	Frequently	Always	Frequently + Always	N	Mean	Never	Seldom	Sometimes	Frequently	Always	Frequently + Always	N
<b>FACTOR 1 - OPPORTUNITIES FOR PROFESSIONAL DEVELOPMENT &amp; COLLABORATION cont.</b>																
9. The teachers in my school meet as a whole staff to discuss ways to improve teaching and learning.	2.91	2.6	8.4	19.6	34.4	35.0	<b>69.4</b>	11655	2.88	2.5	8.6	20.8	34.5	33.7	<b>68.1</b>	52058
20. We set aside time to discuss what we learned from our professional development experiences.	<b>2.53</b>	4.7	13.3	28.6	31.4	21.9	<b>53.3</b>	11589	<b>2.54</b>	4.5	12.9	28.3	32.4	21.9	<b>54.3</b>	51805
13. We use several sources to evaluate the effectiveness of our professional development on student learning (e.g. classroom observations, teacher surveys, conversations with principals or coaches).	2.98	1.3	6.6	19.5	37.9	34.6	<b>72.6</b>	11620	2.96	1.4	6.6	19.9	38.5	33.6	<b>72.1</b>	51884
12. Teachers at our school learn how to use data to assess student learning needs.	3.04	0.9	4.4	19.5	40.3	34.9	<b>75.2</b>	11643	3.01	0.7	4.7	20.4	41.8	32.4	<b>74.2</b>	51971
3. We design evaluations of our professional development activities prior to the professional development program or set of activities.	2.56	7.4	11.2	24.5	31.9	25.0	<b>56.9</b>	11579	2.58	7.1	11.2	24.1	31.8	25.8	<b>57.6</b>	51716
17. The professional development that I participate in models instructional strategies that I will use in my classroom.	2.89	1.4	6.2	22.8	41.5	28.1	<b>69.6</b>	11594	2.90	1.3	5.6	23.1	42.2	27.8	<b>70.0</b>	51669
23. My school structures time for teachers to work together to enhance student learning.	2.86	2.5	8.3	22.6	34.3	32.3	<b>66.7</b>	11596	2.87	2.2	8.7	21.9	34.6	32.5	<b>67.1</b>	51857

Differences between urban and non-urban schools significant at .001 level

Question	URBAN SCHOOLS/DISTRICTS									NON-URBAN SCHOOLS/DISTRICTS								
	Mean	Never	Seldom	Sometimes	Frequently	Always	Frequently + Always	N	Mean	Never	Seldom	Sometimes	Frequently	Always	Frequently + Always	N		
<b>FACTOR 1 - OPPORTUNITIES FOR PROFESSIONAL DEVELOPMENT &amp; COLLABORATION cont.</b>																		
19. Substitutes are available to cover our classes when we observe each others' classes or engage in other professional development opportunities.	2.53	7.8	14.3	23.1	27.1	27.8	<b>54.8</b>	11616	2.54	7.4	13.6	24.4	26.3	28.2	<b>54.6</b>	51837		
29. We observe each other's classroom instruction as one way to improve our teaching.	2.11	11.4	19.9	30.1	23.4	15.1	<b>38.5</b>	11558	2.11	10.7	20.1	31.1	23.5	14.6	<b>38.1</b>	51761		
27. Our professional development promotes deep understanding of a topic.																		
34. We receive feedback from our colleagues about classroom practices.	2.60	3.2	11.0	29.8	34.3	21.7	<b>56.0</b>	11556	2.59	3.2	11.2	30.0	34.6	20.9	<b>55.5</b>	51789		
14. We make decisions about professional development based on research that shows evidence of improved student performance.	2.93	1.7	5.5	21.8	39.8	31.2	<b>71.0</b>	11610	2.94	1.5	5.5	20.9	41.6	30.5	<b>72.1</b>	51775		
<b>FACTOR 1 AVERAGE</b>	<b>2.76</b>						<b>63.6</b>		<b>2.76</b>						<b>63.7</b>			

Source: National Staff Development Council Survey, 2007-08

Question	URBAN SCHOOLS/DISTRICTS								NON-URBAN SCHOOLS/DISTRICTS							
	Mean	Never	Seldom	Sometimes	Frequently	Always	Frequently + Always	N	Mean	Never	Seldom	Sometimes	Frequently	Always	Frequently + Always	N
<b>FACTOR 2 - SCHOOL LEADERSHIP</b>																
48. I would use the word, empowering, to describe my principal.	2.91	6.1	7.1	17.7	28.2	40.8	69.1	11553	2.97	4.5	6.7	17.8	29.0	42.0	71.0	51455
58. Our principal models effective collaboration.	2.97	4.0	6.9	17.7	31.3	40.1	71.5	11499	3.03	2.9	6.1	17.3	32.2	41.6	73.7	51349
47. Our principal models how to build relationships with students' families.	2.90	4.0	8.0	19.4	31.3	37.3	68.6	11536	2.96	3.1	7.3	19.3	31.5	38.8	70.3	51492
45. Our principal fosters a school culture that is focused on instructional improvement.	3.33	1.4	3.0	10.7	30.4	54.5	84.9	11579	3.41	1.0	2.4	9.4	29.4	57.7	87.2	51630
10. Our principal's decisions on school-wide issues and practices are influenced by faculty input.	2.83	3.1	8.5	21.3	35.9	31.1	67.0	11641	2.90	2.4	7.1	20.5	37.8	32.2	70.0	52058
18. Our principal is committed to providing teachers with opportunities to improve instruction (e.g. observations, feedback, collaborating with colleagues).	3.19	1.4	4.8	14.4	32.4	47.0	79.5	11612	3.23	1.2	4.4	13.7	32.2	48.6	80.8	51879
60. Our administrators engage teachers in conversations about instruction and student learning.	3.00	2.5	6.3	17.8	35.3	38.1	73.4	11505	3.06	1.7	5.5	17.3	36.2	39.3	75.5	51357
1. Our principal believes teacher learning is essential for achieving our school goals.	3.58	0.3	1.1	6.4	24.3	67.8	92.2	11669	3.63	0.2	0.9	5.3	23.2	70.4	93.6	52186
43. Our school leaders encourage sharing responsibility to achieve school goals.	3.12	1.6	4.5	15.6	37.0	41.3	78.3	11583	3.17	1.1	4.0	14.5	37.5	42.8	80.3	51644
49. School goals determine how resources are allocated.	2.92	2.2	5.6	21.8	39.1	31.3	70.4	11474	2.91	1.7	5.7	22.7	39.9	30.0	69.9	51101
<b>FACTOR 2 AVERAGE</b>	<b>3.07</b>						<b>75.5</b>		<b>3.13</b>						<b>77.2</b>	

Differences between urban and non-urban schools significant at .001 level

Differences between urban and non-urban schools significant at .01 level

Question	URBAN SCHOOLS/DISTRICTS								NON-URBAN SCHOOLS/DISTRICTS							
	Mean	Never	Seldom	Sometimes	Frequently	Always	Frequently + Always	N	Mean	Never	Seldom	Sometimes	Frequently	Always	Frequently + Always	N
<b>FACTOR 3 - EQUITY</b>																
33. Teachers show respect for all of the student sub-populations in our school (e.g. poor, minority).	3.41	0.3	1.9	10.7	31.3	55.9	<b>87.2</b>	11584	3.45	0.2	1.6	9.2	30.6	58.4	<b>89.0</b>	51920
37. Teachers at our school expect high academic achievement for all of our students.	3.38	0.4	2.0	11.4	32.3	54.0	<b>86.3</b>	11574	3.39	0.3	1.8	10.9	32.6	54.5	<b>87.0</b>	51877
44. We are focused on creating positive relationships between teachers and students.	3.36	0.5	2.5	11.3	32.2	53.5	<b>85.7</b>	11592	3.43	0.4	1.9	9.1	31.5	57.0	<b>88.6</b>	51651
55. Teachers work with families to help them support students' learning at home.	2.90	1.2	6.4	23.0	40.0	29.4	<b>69.4</b>	11528	2.88	1.1	6.8	24.3	38.9	28.9	<b>67.8</b>	51393
24. At our school, we adjust instruction and assessment to meet the needs of diverse learners.	3.17	0.6	3.4	15.4	40.1	40.6	<b>80.7</b>	11582	3.17	0.5	3.2	15.3	40.8	40.1	<b>80.9</b>	51838
46. Teachers use student data when discussing instruction and curriculum.	3.14	0.8	3.3	16.7	39.8	39.5	<b>79.3</b>	11557	3.15	0.6	3.0	16.2	41.1	39.1	<b>80.2</b>	51506
35. In our school we find creative ways to expand human and material resources.	2.94	1.3	5.5	22.0	40.2	30.9	<b>71.1</b>	11541	2.94	1.1	5.4	22.1	40.9	30.4	<b>71.4</b>	51791
38. Teacher professional development is part of our school improvement plan.	3.41	0.6	1.7	9.7	31.9	56.1	<b>88.0</b>	11526	3.44	0.5	1.8	9.0	30.5	58.2	<b>88.7</b>	51651
31. Communicating our school mission and goals to families and community members is a priority.	3.11	1.2	5.3	17.0	34.2	42.3	<b>76.5</b>	11579	3.08	1.2	5.7	18.1	34.3	40.7	<b>75.0</b>	51893
<b>FACTOR 3 AVERAGE</b>	<b>3.20</b>						<b>80.4</b>		<b>3.21</b>						<b>81.0</b>	

Source: National Staff Development Council Survey, 2007-08

Question	Mean	Never	Seldom	Sometimes	Frequently	Always	Frequently + Always	N	Mean	Never	Seldom	Sometimes	Frequently	Always	Frequently + Always	N
	URBAN SCHOOLS/DISTRICTS								NON-URBAN SCHOOLS/DISTRICTS							
	FACTOR 4 - TEACHER INFLUENCE & COLLABORATION															
53. At our school, teachers can choose the types of professional development they receive (e.g. study group, action research, observations).	2.41	6.9	14.2	29.1	30.6	19.2	49.8	11510	2.37	7.0	15.2	30.1	29.5	18.2	47.8	51370
56. Teachers examine student work with each other.	2.61	2.5	10.4	31.5	35.1	20.5	55.6	11498	2.59	2.4	10.9	31.8	35.4	19.5	55.0	51325
52. Teachers' prior knowledge and experience are taken into consideration when designing staff development at our school.	2.71	3.2	8.6	26.3	37.6	24.2	61.8	11486	2.71	2.9	8.8	26.8	37.7	23.8	61.5	51216
51. We use students' classroom performance to assess the success of teachers' professional development experiences.	2.70	2.6	8.6	27.9	38.6	22.4	61.0	11463	2.68	2.6	8.5	28.3	39.3	21.3	60.6	51178
54. Our school's professional development helps me learn about effective student assessment techniques.	2.70	2.6	8.5	28.8	36.7	23.4	60.1	11500	2.70	2.1	8.3	29.5	37.1	22.9	60.0	51333
FACTOR 4 AVERAGE	2.62						57.7		2.61						57.0	

Differences between urban and non-urban schools significant at .001 level

Differences between urban and non-urban schools significant at .01 level

Question	URBAN SCHOOLS/DISTRICTS								NON-URBAN SCHOOLS/DISTRICTS							
	Mean	Never	Seldom	Sometimes	Frequently	Always	Frequently + Always	N	Mean	Never	Seldom	Sometimes	Frequently	Always	Frequently + Always	N
	URBAN SCHOOLS/DISTRICTS								NON-URBAN SCHOOLS/DISTRICTS							
<b>ITEMS WITH NO FACTOR LOADINGS</b>																
4. Our school uses educational research to select programs.	3.10	0.9	3.9	17.7	39.0	38.6	<b>77.5</b>	11600	3.12	0.9	3.5	16.8	40.1	38.7	<b>78.8</b>	51894
21. When deciding which school improvement efforts to adopt, we look at evidence of effectiveness of programs in other schools.	2.78	1.9	7.0	26.1	40.8	24.2	<b>65.0</b>	11554	2.80	1.9	6.4	25.8	41.3	24.6	<b>65.9</b>	51657
22. We design improvement strategies based on clearly stated outcomes for teacher and student learning.	3.00	1.0	4.6	19.9	42.6	31.9	<b>74.6</b>	11567	3.00	1.1	4.3	20.0	43.1	31.6	<b>74.6</b>	51638
25. We use research-based instructional strategies.	3.21	0.4	2.4	14.5	41.1	41.5	<b>82.6</b>	11564	3.20	0.5	2.1	14.5	42.9	40.0	<b>82.9</b>	51723
26. Teachers at our school determine the effectiveness of our professional development by using data on student improvement.	2.90	1.8	6.3	22.2	39.4	30.3	<b>69.8</b>	11556	2.88	1.9	6.7	22.7	39.5	29.2	<b>68.8</b>	51659
28. Our school's teaching and learning goals depend on staff's ability to work well together.	2.91	2.1	5.8	21.4	39.9	30.8	<b>70.7</b>	11519	2.94	1.8	5.4	21.0	40.0	31.7	<b>71.7</b>	51539
30. At our school, evaluations of professional development outcomes are used to plan for professional development choices.	2.63	4.2	10.4	27.4	34.6	23.4	<b>58.0</b>	11486	2.62	4.0	10.2	27.8	35.5	22.5	<b>58.0</b>	51344
32. Beginning teachers have opportunities to work with more experienced teachers at our school.	3.01	1.7	6.7	19.5	33.1	38.9	<b>72.1</b>	11573	3.01	1.6	6.9	19.4	32.6	39.4	<b>72.0</b>	51855

Source: National Staff Development Council Survey, 2007-08

Question																		
	Mean	Never	Seldom	Sometimes	Frequently	Always	Frequently + Always	N	Mean	Never	Seldom	Sometimes	Frequently	Always	Frequently + Always	N		
	URBAN SCHOOLS/DISTRICTS									NON-URBAN SCHOOLS/DISTRICTS								
<b>ITEMS WITH NO FACTOR LOADINGS cont.</b>																		
36. When considering school improvement programs we ask whether the program has resulted in student achievement gains.	3.03	1.5	4.3	18.6	40.3	35.3	75.6	11508	3.07	1.2	4.1	17.7	40.4	36.6	77.0	51625		
39. Teachers use student data to plan professional development programs.	2.99	1.7	5.7	20.0	37.7	35.1	72.7	11511	2.98	1.8	5.4	19.8	38.8	34.2	73.0	51513		
40. School leaders work with community members to help students achieve academic goals.	2.74	2.6	9.2	26.2	35.6	26.4	62.0	11501	2.70	2.5	9.8	27.5	35.3	24.8	60.1	51498		
41. The school improvement programs we adopt have been effective with student populations similar to ours.	2.87	0.9	3.6	26.3	46.5	22.8	69.2	11439	2.88	0.7	3.2	25.8	47.6	22.6	70.2	50884		
42. At my school, teachers learn through a variety of methods (e.g. hands-on activities, discussion, dialogue, writing, demonstrations, practice with feedback, group problem solving).	3.08	1.0	5.2	18.0	37.0	38.9	75.9	11591	3.09	0.9	5.2	17.2	37.5	39.2	76.7	51654		
50. Teachers analyze classroom data with each other to improve student learning.	2.95	1.8	6.2	20.5	38.3	33.2	71.5	11530	2.94	1.6	6.3	21.1	39.0	32.0	71.1	51391		
57. When we adopt school improvement initiatives we stay with them long enough to see if changes in instructional practice and student performance occur.	2.76	2.7	8.0	25.7	37.6	26.0	63.6	11443	2.74	2.6	8.3	26.2	38.1	24.9	63.0	51007		
59. Teachers receive training on curriculum and instruction for students at different levels of learning.	2.85	1.8	7.3	23.7	38.4	28.8	67.2	11489	2.83	1.8	7.4	24.3	38.6	27.9	66.5	51303		

Differences between urban and non-urban schools significant at .001 level

Differences between urban and non-urban schools significant at .01 level





