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# Personalizing Professional Development for Teachers

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## Personalizing Professional Development for Teachers

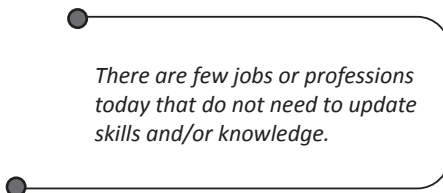
*Catherine C. Schifter*

Personalized professional development (PPD) takes the notion of individualized instruction for students and applies it to teachers. An assistant principal from a California school stated, “We all have different strengths and areas of potential growth” (Ullman, 2015, p. 19). PPD for teachers includes many facets, such as developing their skills to use multiple methods of teaching for each child’s strengths and challenges, but also developing teachers’ own professional knowledge and skills based on their own strengths and weaknesses.

The concept of professional development is a long, time-honored tradition. There are few jobs or professions today that do not need to update skills and/or knowledge. Whether you are a car mechanic, dentist, secretary, or statistician, new technologies and procedures are required to stay current.

With this trend comes scholarly reviews, studies, and theories for effective and valid professional development. The National Staff Development Council (now Learning Forward) published standards for staff development. The *Journal of Staff Development* (2001), out of the Learning Forward organization, provides a dedicated vehicle for publication of both scholarly research and opinion pieces to guide professional development practice across all fields. Books have been written to provide road maps for professional development (see Guskey, 2000; Joyce & Showers, 2002; among others). It is important to point out that research on professional development tends to be program and/or content specific, and atomistic in nature, making outcomes difficult to generalize.

Within education, the No Child Left Behind Act of 2001 (U.S. Department of Education, 2002) required highly qualified teachers in all grades for all subjects, but also required high-quality professional development to be available for all teachers. The Teaching Commission (2004) report titled “Teaching at Risk: A Call to Action” argued



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that “helping our teachers to succeed and enabling our children to learn is an investment in human potential, one that is essential to guaranteeing America’s future freedom and prosperity” (p. 11). In order to meet these requirements, high-quality professional development, that meets the specific needs of each and every individual teacher, must be established as a priority for teachers.

This chapter provides a brief overview of the literature on professional development as it relates to education, but not an in-depth review due to the extensiveness of the literature; introduces the change theory within the realm of professional development (often missing from the literature); introduces two adult learning theories to support the self-directed approach of personalized PD; provides an in-depth example of personalized PD for teachers; and provides action principles for state, district, and local leaders around the concept of personalized PD for teachers.

### **Professional Development Literature Review**

Griffin (1979) wrote, one requirement of a profession is that “members somehow continue to learn, to grow, to renew themselves, so that their interaction with ideas and with clients are reflective of the best knowledge and skill available to them” (p. 127). This concept has not diminished over the last 30 plus years. On the contrary, the growth in information, the explosion of access to information and data through the Internet, and Cloud computing make the notion of being on the cutting edge (depending on the discipline) difficult to maintain. While it is true that we have access to more and more information, having a thorough understanding of all that information, in order to say one is currently knowledgeable, is exponentially more difficult as the amount of information to which one has access grows. In some areas of study (e.g., games in education, medicine, physics, or computing), keeping up with the new information and trends can be a monumental challenge.

The majority of the literature speaks of professional development in many ways, providing practitioners with a myriad of ideas, but constantly stressing what is wrong with those efforts. Wood and Thompson (1980), in discussing guidelines for better staff development, suggested professional development consisted of a series of “[d]isjointed workshops and courses focus[ed] on information dissemination rather than stressing the use of information or appropriate practice in the classroom” (p. 374). The authors go on to state that most professional development programs were not part of an overall, well-planned approach for school staff. Ball and Cohen (1999) agreed with this depiction, adding that while districts spend lots of money on professional development in the United States annually, “most is spent on sessions and workshops that are often intellectually superficial and disconnected from deep issues of curriculum and learning, fragmented and non-cumulative” (p. 4). Wilson and Berne (1999) suggested that professional development for teachers tends to be scattered half-day or full-day events that are not well planned or coordinated over time, thus giving the appearance of being disconnected and/or serendipitous.

Many papers written in the last 35 years provided guidelines or advice to school districts on how professional development can be successful. Sparks (1994) posited three factors: (1) results-driven education using student outcomes as the focus; (2) systems thinking for seeing the big picture or sum of the parts, rather than individual pieces; and (3) constructivist, action research and reflective practice in the classroom with peer

collaboration. These concepts were born out of the accountability movement that began in the mid-1980s, and while they are not considered novel in 2015, perhaps they were in 1994 given trends of that time.

As noted before, several authors have presented ideas of what makes for effective professional development (Abdal-Haqq, 1996; Richardson, 2003; Sparks, 1994, 2002). Concepts in common include:

- school-based and or school-wide and ongoing;
- collaborative in nature facilitating collegiality across and between teachers much like a community of scholars (see introduction of communities of practice below);
- focuses on student learning;
- recognizes teachers as professionals;
- constructivist in nature;
- supports teacher deeper understanding of both content and research-based approaches to teaching; and
- supported by administrators with funding and time to practice new skills.

Wilson and Berne (1999) conducted an analysis of the professional development literature across disciplines, such as mathematics, English, and science, and they explored three themes which they suggested crossed the literature. These were: communities of learners redefining practices; teacher learning activated for maximum effect; and adopting Lord's (1994) "critical collegueship" (p. 194-195) with professional, critical discourse among peers.

Collaborative models, supported by Borko and Putnum (1998) and Perry, Watson, and Calder (1999), suggest "nurturing learning communities within which teachers try new ideas, reflect on outcomes, and co-construct knowledge about teaching and learning in the context of authentic activity" (Butler, Lauscher, Jarvis-Selinger, & Beckingham, 2004, p. 436). This collaborative community of practice (COP) resonates with the work of Lave & Wenger (1991) and that of Brown, Collins, and Duguid (1989) that puts learning as essential within a socially situated context. As noted by Butler and colleagues, the collaborative model includes common goals within the local school setting. While each teacher explored innovative teaching strategies for his or her classroom, it was through the collaborative dialogue where the teachers shared and co-constructed knowledge. Butler et al. (2004) continued by demonstrating how individual, self-regulated learning was not antithetical to COP frameworks. They noted, "...focusing on individual learning does not require divorcing the individual from context. Indeed, the potential of merging a COP framework and models of self-regulation is that the latter describes how individuals strategically adapt within environments to achieve authentic goals" (p. 439). The social collaboration supports self-regulated, individualized practices in ways that could not be attained otherwise. Sometimes working alone on a problem is not sufficient.

The idea of communities of learners came out of the work of Lave and Wenger (1991) on communities of practice. Subsequently, Wenger and Trayner (2015) defined communities of practice as "people who engage in a process of collective learning in a shared domain of human endeavor" (p. 1). From Wilson and Berne's perspective (1999), being in a community of learners gives teachers support within the classroom giving them a way to discuss action research ideas in a supportive and collaborative environment.

Professional development would not be just prepackaged and delivered, but activated for maximum effect using the community of learners for support. Lord's (1994) concept of critical collegueship brings these two themes together to establish a peer-to-peer meaningful relationship. These ideas will come up again in this chapter.

Putnum and Borko (2000), working with situated cognition (which also comes out of the work of Brown, Collins, & Duguid, 1989; Lave & Wenger, 1991), argued that knowing and learning are “(a) situated in a particular physical and social context; (b) social in nature; and (c) distributed across the individual, other persons, and tools” (p. 4). As Schifter (2008) wrote, “Professional knowledge is not developed in a vacuum, but in a context relevant to the knowledge, organized and accessed in meaningful ways as relating to the classroom for teachers” (p. 45). Again, there is a connection across these different authors' perspectives: teachers working collaboratively with critical colleagues to support renewal and new learning, over time.

Since the enactment of the NCLB (U.S. Department of Education, 2002), teachers are held accountable for students' learning at proficiency levels across content and grades. Assuring continuing teachers have the knowledge and skills required becomes essential for all schools across all states. The need for effective professional development became imperative, and yet, change takes time. Both Sparks (1994) and Lauro (1995) noted that it can take up to five years for an innovation (i.e., change in practice) to be fully implemented. Collins (2001), in his study of successful companies, supported this concept when he stressed that successful innovation includes patience, along with persistently sustained support and effort over time. DuFour (2004) suggests this works in schools as well.

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Sparks (2002) strongly suggested that effective PD meets the goals of the standards-based era. He gave a nod to change theory when he cited Michael Fullan (1991), who said “The greatest problem faced by school districts and schools is not resistance to innovation, but the fragmentation, overload, and incoherence resulting from the uncritical acceptance of too many different innovations” (p. 197). As I tell my own students, just because you know of an innovation does not mean you have to try to incorporate it, if it does not match or answer the problem you are trying to solve. Changing practice every year because of some new idea makes no sense because the teacher never has time to master the first innovation or to figure out whether an innovation worked or not.

In making his case for these practices, Sparks (2002) cited a number of studies looking at professional development initiatives. From *Does Professional Development Change Teaching Practice?: Results from a Three-Year Study* (U.S. Department of Education, 2000), a study of the federal Eisenhower professional development program, he noted that teachers who participated in what was termed “reform type” of professional development increased their use of new strategies in teaching science and math. The “reform type” of activities were described as teacher study groups; teacher collaboratives, networks, or committees; mentoring; internships; and resource centers—or activities best described as promoting active learning (p. 15).

Richardson (2003) suggested three reasons why research-based practices are not the norm today: it is expensive, it occurs over a long time period, and it is hard to support when the participants are allowed to make decisions regarding goals and outcomes. She

suggested that it is much easier, and considered cost efficient, to offer one training for all. She further suggested the “closed classroom door” effect (p. 402) allowed teachers to assume autonomy precluding anyone telling them how to teach: “This classroom is unique and is therefore unlike any other classroom because of my uniqueness and my particular group of students” (p. 402). While the notion of teacher individuality/uniqueness pervades the U.S. system, since NCLB there was a call for teachers across grade levels to equally be responsible for all students’ progress. Are the ideas of teacher autonomy and professional development antithetical? Not really, but the approach taken may make the difference in teacher buy-in and participation.

Hilda Borko (2004) skillfully mapped the terrain of educational professional development as having three actors/agents (teachers, the program itself, and facilitators), all within a unique context (school, district, community, etc.). Looking at the factors identified by Ball (1996) for how teachers learn, understanding how and why a particular professional development program impacts an individual teacher is a complex question to answer. Perhaps the answer is not merely in the literature but also, considering what we know about the “change processes,” in schools as well as in adult learning theory.

### **A Few Models to Consider**

The idea of individualized, or personalized, instruction for teachers is not new. Indeed, Frances Fuller suggested in 1970 that research supported individualized instruction for students and future teachers, thus providing the first evidence of thought toward teacher individualized professional development. In considering personalized learning for teachers, Fuller noted the importance of what she termed “the concerns model” (p. 30). Within the concerns model, Fuller posited the need to have “concerns” about students’ needs, motives, abilities, and emotions in the forefront of thought for planning. If we consider the term ‘students’ broadly, then professional development should be personalized to concerns about each teacher’s needs, motives, abilities, and emotions. Overall, these concerns revolved around the students in the teacher’s classroom. Because each classroom has a unique community of students, which changes as students evolve from one year to the next, professional development that supports one teacher one year may or may not support the teacher next door or upstairs.

Clark and Hollingsworth (2002) developed an interconnected model of professional growth. The model “suggests that change occurs through the mediating processes of ‘reflection’ and ‘enactment’, in four distinct domains which encompass the teachers’ world” (p. 950). This includes the personal domain of teacher knowledge, beliefs, and attitudes; the professional practice domain of experience developed over time; the domain of consequences, or outcomes in the age of assessment and testing; and the external domain which is outside the teacher’s personal world (e.g., sources of information, support). They suggest that this model recognizes the idiosyncratic and individual nature of teacher professional growth, more so than other theories of teacher development.

In 2008, the International Academy of Education published the booklet *Teacher Professional Learning and Development* (Timperley, 2008) as part of their Educational Practices series. This booklet synthesized research on teacher professional development that “has been demonstrated to have a positive impact on student outcomes” (p. 6). There were 10 key principles for success presented, but behind these were four essential understandings:



- Notwithstanding the influence of factors such as socio-economic status, home, and community, student learning is strongly influenced by what and how teachers teach;
- Teaching is a complex activity;
- It is important to set up conditions that are responsive to the ways in which teachers learn; and
- Professional learning is strongly shaped by the context in which the teacher practices. (p. 6)

However, there was no reference to community of practice or learners. On the contrary, the emphasis was on context and how teachers learn, which is often ignored in the professional development literature. Deborah Ball (1996) suggested that how teachers learn should be considered when planning and developing professional development. She suggested several factors that impact teacher learning, which mirrored those listed above as essential for successful professional development overall, but also included prior beliefs and experiences, context of the school (inner city, rural, private or public education), competing demands on time, and reflective practice.

Richardson (2003) suggested an inquiry approach to professional development. Here the teachers determine their individual goals (which could be “concerns,” à la Fuller, 1970) and perhaps collective goals, try out new practices, gather data along the way, and engage in collegial dialogue regarding what works or not using their evidence to support claims and discussion. As she noted, “[T]here are times when a collective sense of goals and instructional approaches is called for” (p. 402). This is especially true when a chosen curriculum crosses grades, thus causing teachers in all grades affected to have a need to work collaboratively. While this may sound like standardization, the reality is that teachers can work collaboratively while concentrating on their individual classroom needs.

Voogt and colleagues (2015) proposed a collaborative design. They suggested “that teacher professional development needs to be concerned with social aspects of learning, distributed across individuals and events, and directly meaningful to teachers’ practice” (p. 260). They go on to suggest that formal professional development is not enough to consider, but also what happens within the classroom, COP in the school, and the school environments are important as well (see discussion before related to Borko & Putnam, 1998, and Perry et al., 1999). Voogt et al. suggested, through shared collaborative adaptation of curricula, teachers not only learn about new curricula and/or teaching methods, but also develop personal ownership for implementing within their classrooms.

Voogt et al. (2015) noted how, using a situated learning viewpoint, teachers were actively engaged in personalized learning for their own practices while collaborating with others in a COP that was meaningful for all (p. 261). This process capitalized on distributed knowledge and the collaborative nature of COPs. Here teachers identified and valued differing perspectives and interpretations, and negotiated toward collective growth. Teachers became personalized agents of change, yet collectively they could accomplish so much more.

How is self-directed, or individualized, learning manifested in the 21st century? Actually, there are more—and easier to access—opportunities than ever before. Ferriter and Provenzano (2015) describe how one teacher’s use of a blog and a Twitter account established vehicles whereby he networked with over 30,000 followers/teachers on Twitter.

He established a social space through social media where teachers could explore teaching methods along with other teachers from across the country, not just in their school or community. This is an example of learning from others, sharing what works or not, discussing ideas, true collaborative dialogue – just not in real time. As they noted, “The relationship that develops between blog writers is symbiotic” (p.18). They challenge each other, give advice, all of which results in strong professional, albeit virtual, relationships. This process mirrors the concept of COP, but in a virtual environment. It also personalizes the learning space, which is powerful.

One last model needs to be included here. As chronicled in a *Philadelphia Inquirer* article, Graham (2015) presented the EdCamp “unconference” approach to professional development, which has gotten the attention of the Bill & Melinda Gates Foundation. She states, “A recent foundation report found that the \$18 billion schools are spending annually on professional development ‘is simply not working’” (p. A6). What makes EdCamp different is the design of the event. There are no fees and no predetermined sessions or topics. Teachers are asked to sign up to lead discussions about topics for which they believe they can serve as the “expert.” Teachers then attend only those sessions that they see as appropriate for their needs. The structure allows teachers to become leaders in their fields and with others, to collaborate with like-minded professionals, and to come away with ideas and resources to implement changes in their classrooms. While the EdCamp idea is considered a collaborative professional development model, one can easily see the translation to the personalized construct where teachers bring their classroom needs and learn from each other. The concept of the EdCamp “unconference” spawned 225 EdCamps in 2014 held around the world. The most recent was EdCamp Ukraine in June 2015. The Gates Foundation has found the model so compelling that they are investing two million dollars.

The first question to ask is whether the term “professional development” captures the essence of what is being proposed through self-directed or individualized professional learning. If the idea is “deficit reduction,” then “professional development” works. If, as proposed by Webster-Wright (2009), the concept is about continuous professional learning, then we should use that phrase and call it “continuous professional learning” (CPL). Or we should look again at the work of Clark and Hollingsworth (2002) to explore further their interconnected model of professional growth as it focuses on the individual teacher’s development. While the EdCamp structure is intriguing, there is no evidence, as yet, on the impact of that model on individual classrooms.

Overall, the literature on professional development is mixed. There are myriads of papers presented at conferences, published in journals, and presented as roadmaps for successfully guiding teachers toward innovative curricula and/or teaching methods. And yet, experts continue to lament the discrepancies between research-based programs and those implemented traditionally in schools. Is the problem a lack of distribution of ideas, lack of funding in schools, or perhaps something else? We do not know the definitive answer to that question, but there are many examples of good program design to choose between.

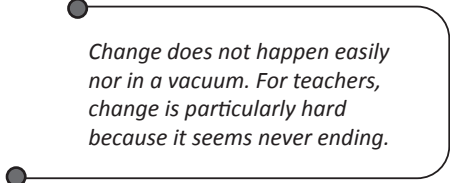
Across the literature reviewed for this chapter, one idea runs throughout: teachers working collaboratively with critical colleagues while also pursuing self-directed learning to support renewal, new learning, over time. The operative terms are all related to active engagement in commonly held goals for the betterment of all students.



## Change Theory Applied to Personalized PD

All professional development, or professional learning, or CPL, relate to changing practices. Again, there is a wealth of literature on change in education (see Fullan, 1982). But what is striking in reading the literature is the lack of consideration of how change occurs in organizations or within teachers.

Change does not happen easily nor in a vacuum. For teachers, change is particularly hard because it seems never ending. As Larry Cuban (1986) noted, “Constants amid change...” (p. 1). We can always count on changes in subject matter (e.g., standards, curriculum, pedagogical methods), equity among diverse learners, uses of student assessments, the social organization called “school,” and the profession of teaching (Little, 1993). Every change or innovation brought into schools comes with good intentions. But with all the change comes skepticism, waiting for the next change or innovation to come through the door. Little’s paper did not address personalized professional development (PPD); however, one could hypothesize PPD for teachers as a way to facilitate implementation of an innovation as it applies to each individual teacher, rather than thinking schoolwide.



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Rogers (2003), in his book *Diffusion of Innovations*, proposed that for an innovation (or change) to be accepted in a school or classroom, teachers must have knowledge of the innovation, have interest in exploring the innovation, be able to evaluate the innovation before trying it out, implement it in the classroom, and, finally, fully integrate and promote the innovation to others. As part of this process, Rogers suggested five criteria for an innovation (or change) that must be met. From the above stages, these five criteria would come into play with evaluating and trying out the innovation. The innovation must demonstrate relative advantage (e.g., Is the innovation considered to be better than what is currently used?), compatibility (e.g., Is the innovation well-matched with the culture of the classroom?), ease of use to implement and trialability (e.g., Can I test it out before adopting it fully in my classroom?) and observability in other teachers’ classrooms where it has worked well. Each of these criteria can be applied to PPD for implementing change into an individual teacher’s classroom.

Further, Rogers (1962) noted that “[t]he diffusion of innovations takes place within a social system” (p. 303). Looking at the five criteria above, the social aspect of schools comes through with peers demonstrating to peers what works, how it works, and why it works. The social organization of schools can be an asset for implementing change, or it can be the biggest hurdle to overcome. Personalized professional development comes into play with change theory as the most effective way to impact individual teacher’s practices and classroom outcomes.

Lastly, in a review of a professional development program designed for the Philadelphia School District in partnership with IBM Corporation, I developed a lens for reviewing technology-oriented PPD, but suggest it resonated with the professional development literature (reviewed above) and the change literature (just presented). From studying the implementation of the Continuous Practice Improvement professional development program over a seven-year period, using change theories to guide the analysis, the outcome

was a view of successful change through PPD—but only when *all* elements were successfully in place. Assuming that one starts with strong and useful professional development training (no matter the content), the principles were:

- Time to practice, develop interest and knowledge, evaluate usefulness for own classroom and students, try new skills with students, and to adopt or reject the innovation based on these opportunities;
- Effective, ongoing, post-training support in the classroom;
- Ongoing communication and a local social support system, including significant support from the principal and/or other influential school staff; and
- Changes in classroom structures, roles and behaviors, knowledge and understanding, and thus values.

As noted above, change is difficult, and for teachers, change is a constant in their lives from new curricula, new leadership, new students, and more. However, if change is managed according to what is known about how change happens, everyone involved will be satisfied. We know that change takes time. We know that change happens best if the participants feel and believe they are valued members of the community. We know that change happens best if there is transparent communication about goals, expectations, peer-to-peer collaborations, and outcomes. We cannot ignore the aspects of change processes as we consider how professional learning improves teachers' classroom practices. From these attributes we can speculate that, through PPD, change will more likely happen and be sustained over time.

### **Adult Learning Theory Applied to PPD**

Malcolm Knowles (1968) adopted the term *andragogy* as a way of differentiating between how adults prefer to learn and how pre-adults are taught in K–12 environments, or *pedagogy*. While the term tends to only be used in organizational development arenas, the assumptions articulated by Knowles speak to the concept of PPD for teachers. Specifically, Knowles posited that, as we mature, we become more self-confident and move away from dependence on others to tell us what we need to know, to being self-directed and deciding what we want/need to know and why. Knowles said adults expect new knowledge to have an immediate impact on their lives, not to be used only in the future when it seems needed. Further, Knowles noted the most important motivation for adult learners was interest, examples being wanting a promotion, changing jobs, or being evaluated on job performance. PPD for teachers directly relates to self-directed learning with clear reasons for why skill/knowledge development is important for teachers (i.e., helping all children maximize their strengths and work on challenges).

McClusky's (1963) Theory of Margin presented a concept of adult learning as a dynamic process of continuous development over time requiring energy and resources for all aspects of daily life. The theory views motivation to learn (i.e., develop) as the relationship between how many resources (i.e., power) the learner has and the demands (i.e., load) that diminish motivation for learning. The power is defined as abilities, position, or allies which a person can muster in coping with the load. Load is then defined as the social and self-demands to maintain autonomy of life (McClusky, 1970). Thus, an appropriate "margin" is needed for the adult to be motivated to learn (i.e., more motivated with greater power/load ratio; less motivated by greater load/power ratio). Theory of Margin

relates to PPD for teachers in that this approach gives the learner more power over their learning process and goals.

Teachers are adults, and thus consideration of how adults learn is an important aspect of both professional development as a whole, but PPD in particular. Consideration of the best aspects of self-directed learning, along with considering how to maximize learner resources (power) and minimize the impact of the demands (load), will be helpful in developing well-received and impactful professional development for teachers over time.

### **Example of PPD**

In the mid-1990s, IBM Corporation's education division partnered with the School District of Philadelphia to help teachers incorporate computer technology into their classroom practices. The project was called Continuous Practice Improvement (CPI). The book *Infusing Technology into the Classroom: Continuous Practice Improvement* presents 57 out of nearly 200 kindergarten through eighth-grade teachers who participated in the CPI professional development program and the impact (or lack thereof) on daily classroom practices from three to seven years after graduating from the program. For over half of these teachers, the impact was found up to seven years post professional development.

CPI consisted of three formal, five-hour, Saturday, face-to-face training sessions where the teachers learned how to use such applications as email and concept mapping tools, along with how to search the Internet and more. They used and were given examples for using the applications with their grade-level students and curricula. In addition, they learned how to use a laptop, loaned to each teacher so they could practice skills and access district resources and the CPI website. For many of these teachers, this was their first contact with a computer. After the formal training, each teacher was paired with another teacher in the district who served as a mentor and expert example for infusing computers into classroom lessons and experiences. Every effort was made for the mentor teacher to teach the same or close grade level so the observations would resonate with the home classroom for the CPI teacher. A substitute teacher took the CPI teacher's class in order for her to spend three full days observing the mentor teacher, and an additional day while the CPI teacher reimagined her classroom and lessons to be able to truly infuse computers into her activities.

The one primary instructor for CPI was available for questions, troubleshooting problems, and classroom visits over the next three to six months. The CPI teacher also could contact their mentor teacher with whom she could share ideas, ask questions, and gain further support. In some schools, whole cohorts of grade-level teachers became CPI teachers together, thus giving them "in house" support. In fact, where there were more than one CPI teacher in a school, these teachers developed a community of practice around using computers in their classrooms and shared ideas and resources with each other as well as other teachers in the school.

CPI was a combination of whole-group (or cohort) basic instruction, with self-directed learning by each teacher based on his/her own classroom and students' needs. During the whole-group Saturday sessions, teachers were encouraged to bring their own experiences and expertise into the conversation. The level of technical/computer experience was broad, with some teachers needing to learn how to turn on their loaner laptop, while others were very familiar with email and Internet resources. What all had in common was a lack of knowledge for how to incorporate computer solutions into their daily classrooms.

Using the Clark and Hollingsworth (2002) model of interconnected professional growth, each of the four domains were addressed. Prior knowledge, beliefs, and attitudes were embraced and used as starting points for growth. The teachers were afforded time and support to develop a level of confidence through experiences as appropriate for their classrooms. This included learning that using student computer expertise was not shameful, but actually supported their teaching in meaningful ways, along with allowing student peer teaching to occur. Outcomes were important in discussions, as the school district implemented a common curriculum with regularly scheduled benchmark assessments, designed to match the competencies being addressed over a six-week period of instruction. Lastly, the CPI program was flexible enough to meet the needs of the ever-changing world of information access and computer technology. While CPI was initially built using the IBM computer, over time it moved to the Apple computer platform as the district standardized elementary classrooms with Apple technology. CPI attempted to minimize the operation system differences by focusing on the needs of each teacher and classroom rather than on the technology. Through this process, a model of PPD was established for each teacher and classroom.

As noted, each teacher used his or her new knowledge and skills to meet the needs of their own classroom. One example is June, who had taught third grade for over 30 years. When June came to the first CPI session, she was afraid of the laptop computer she was being loaned. When it did not do what she expected, she would say loudly that she had broken it. She felt very uncomfortable, but had another teacher from her school there with her, who gave her support. June made it through the formal PD sessions and the mentoring. When observed three months later, she showed me how she was entering her grades by computer, and her students showed me their projects for a social studies lesson on the United States. For classroom resources, June's classroom was hurting. Her world and U.S. maps were torn and could not be used. She had very few books in her classroom. Her social studies resources were three computers. She created individual folders for each child on the computer and a schedule for each to have appropriate time during the day to gather their information. Each child was assigned one of the states, and he or she was to research the state flag, motto, primary industries, major cities and parks, governor's name, and the like. Then each child made a poster about their state as they became the "expert" on that state, and they were asked to teach the other students what they learned (e.g., student peer teaching). The posters were posted around the room as resources for all. June said, "I would never have done this but for CPI! The examples, the homework, the other teachers all helped me get over my fears." In the end, June changed her practices because she had new knowledge and skills just for her students (power from Theory of Margin), and the resources to minimize the load (Schifter, 2008).

The success of the CPI program was demonstrated at the kindergarten through fourth-grade levels, while showing limited success in middle grades, mostly due to the demands of No Child Left Behind legislation (U.S. Department of Education, 2002), along with new curricular and testing requirements of the district. Lastly, CPI was an expensive program requiring finances for 15 hours on Saturdays (i.e., teacher professional development pay), mentor teacher time, substitute teachers pay, and technology resources (e.g., computers, software, printers, cameras).

This example of a PPD program combines the best aspects of good whole-group professional development with appropriate ways to personalize the skills and knowledge

development for each teacher who participated in the CPI program. The most important aspect was that the teachers could observe other teachers modeling the concepts they learned in the formal training, could try them out in their own classroom with resources to support their efforts, and could then customize their classrooms as appropriate for their students' needs. This is an example of Clark and Hollingsworth's interconnected model of professional growth, and a successful example of PPD for teachers.

### **Action Principles for States, Districts, and Schools**

From the above discussion, one concept came out over and over again, that of a community of practice (COP) of learners. Lave and Wenger (1991) posited the idea of a COP where one begins at the periphery of activities and knowledge, and over time slowly becomes a full member of the COP. In education, the members at the periphery are student teachers and novice teachers. As they learn their craft through experience in their classrooms, interacting with other teachers within their context of work (the school), they become more full-fledged members of the COP. It used to be that in order for a COP to exist, the members needed to be in close proximity (thus the notion of legitimate peripheral participation; Lave & Wenger, 1991). However, in the 21st century, social media provides opportunities for establishing COPs across cyberspace using such tools as Twitter, Google Groups, blogs, and more. These tools provide vehicles for teachers by which self-regulated, individualized learning can happen with or without the support of school leadership. These social media tools allow teachers to connect with peers, to collaborate across time and space, and to establish critical friendships that can support self-directed, individualized learning. They may or may not support common goals within a specific school, but to ignore the power of these tools would be unfortunate as they may provide opportunities that could not be afforded through traditional means.

### **Action Principles for States, Districts and Schools**

#### **Action Principles for States and Districts**

- a. Provide administrators with sufficient resources (including funding) to provide high-quality professional development for teachers based on research-based outcomes.
- b. Provide assessment and accountability guidelines for measuring change in teacher effectiveness and/or practices over time.
- c. Provide assessment and accountability systems, or guidelines, to accurately measure the impact of professional development on students in terms of simple cognitive and complex cognitive learning.
- d. Encourage schools to promote communities of practice within and across grade levels and schools.
- e. Reward and/or recognize teachers who successfully develop individualized, self-directed professional development plans while taking advantage of the six secrets of change as outlined by Michael Fullan (2008).
- f. Reward and/or recognize schools/districts that support teacher professional learning over time, with clear guidelines demonstrating that time is a key to change in classroom practices.



### Action Principles for Schools

- a. Engage all teachers in planning for change, valuing peer-to-peer and individualized action-research activities.
- b. Facilitate change by allowing sufficient time for teachers to explore innovations, share outcomes, provide feedback to each other, and thus make wise and appropriate change decisions.
- c. Support high-quality professional development efforts at the whole-school, peer-to-peer, and individualized levels, capitalizing on the “concerns model” elements of needs, motives, abilities, and emotions of all teachers.
- d. Use the six secrets of change presented by Fullan (2008) as a guide for ensuring (a) all teachers are valued, (b) all teachers are connected through common purpose and goals, (c) capacity building for all is a common goal, (d) collaboration and collegiality are encouraged for learning together, (e) transparency across all actions and planning is promoted to make change less threatening, and (f) all of these steps are taken together to result in systems learning, which means change happens.

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