Promoting Teacher Candidates’ Self-Efficacy Through Professional Learning Activities: Towards Equity and Quality Teacher Training
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Abstract

This paper examines teacher candidates’ efficacy through enhanced teacher education programs and rigorous professional learning engagements. Building on the axioms of equity, social justice and pluralism, reforming teacher preparation programs in urban settings is explored along with key reform elements (such as culturally responsive pedagogy, working with English Language Learners, Universal Design of Instruction, co-teaching and the like) that should be systematically and purposefully integrated. Using an action research approach, this paper reports preliminary findings revealed from longitudinal data collected from multiple sources within the context of a federally funded Edvention Partners Teacher Quality Grant. The program’s functions and activities are described based on the current trends and practices along with social forces and demographic trends affecting schools today. Key reform elements necessary for effective teacher preparation programs and teacher efficacy are examined. Implications for enhancing teacher preparation programs are drawn along with workable strategies necessary for sustaining quality professional development opportunities.

Introduction
Teacher quality and effective preparation of teachers have been focal points of school reform efforts throughout the years. School learning outcomes have been associated with teacher efficacy, readiness and preparation (Boyd et al, 2006; Garet et al, 2008; Blank et al, 2009). Thus quality teacher education requires constant renewal and reform. This is especially true given the complexity of the process along with the intervening internal and external factors that affect teacher preparation. Such factors involve all participants in the pre-K-20 community and beyond; they also involve the current trends and practices ranging from shifting paradigms in education to maintaining competitive edge in the international arena (Darling-Hammond et al, 2009). At the same time, meeting evolving state and federal mandates and standards pose a constant challenge for preparing globally competent teachers and students.

Most importantly the demographic fabric of schools requires careful and strategic approaches to ensure teachers are pre-equipped with the knowledge, skill, and will to work with all students who reflect a wide range of social, ethnic, socioeconomic, cultural and linguistic realities. As such teacher quality should be based on the axioms of equity, social justice, and pluralism.

In order to achieve efficacy in teachers, educational programs designed for preparing prospective teachers to effectively work in democratic schools should integrate key elements that are necessary ingredients for promoting positive learning and teaching outcomes. These elements are intricately related and vary in nature based on a continuum that monitors the pace and progress in professional teacher preparation.

This paper draws on longitudinal data findings over the past several years through a teacher quality grant that provides various avenues for pre-service teachers to engage in added opportunities beyond the traditional sense. Since action research is one of the most viable approaches for educational reform and improvement (Corey, 1953; Glanz, 2003; McClean, 1995), the research genre and methodology were used to inform the decision making process and guide the implementation of necessary program modifications and adjustments based on the findings gleaned from various data sources. The discussion explores what data has revealed at a participating campus in the EDVENTION Partners Grant which seeks to enhance teacher self-efficacy and quality in central California and beyond. The Central California Partnership for Teacher Quality Programs (CCP~TQP) is a multi-year federally funded grant that has a network of participating institutions that include three universities and two county offices of education. Finally, the paper reports pertinent key issues, reform elements, strategies and approaches, and other considerations that have direct implications for teacher quality and self-efficacy.

Context and Background

Teacher preparation programs in growingly diverse service areas have a unique opportunity to establish solid foundations for professional skill development in prospective teachers (Berry, Montgomery, & Snyder, 2008). They also have an advantage of being situated in fertile environments to implement comprehensive approaches that produce effective teachers who will in turn positively impact learning outcomes in schools. Recognizing this premise, the California Partnership for Teacher Quality Programs (CCP~TQP) participating institutions have established a blueprint that is grounded in a sound vision for preparing globally competent teachers and students. The community of participants includes a large network of institutions and participants across the pre-K-20 community and embraces other participants at the state and federal levels. Institutionally, participants include three campuses within the California State University system (Bakersfield, Monterey Bay, San Luis Obispo) and two county offices of
education (Kern County Superintendents of Schools and Tulare County Office of Education). In addition, twenty-six high need schools and local agencies are partners of this grant. The primary goals of the Evention grant functions focus on recruiting and preparing high quality teacher candidates and fellows who will be able to undertake their roles effectively in diverse schools.

A logic model was developed for the Edvention partners as a blueprint for the overall program activities and functions. It encompasses a wide range of participatory tasks and contingencies, evaluation and assessment systems, networking and collaborative events, as well as a comprehensive plan for planning and implementing professional learning activities aligned with identified reform elements. Also each partner institution developed their own logic model in light of the unique context along with their focus on pertinent key reform elements. Thus each partner has its unique logic model that keenly relates to the overall scheme in the overall EDVENTION Teacher Quality Program. Despite the unique contexts within each region, there are universal core constructs that center around common principles regarding teacher quality and reform efforts in teacher education programs.

In light of the current trends and practices in education, and with a strong emphasis on science, math, literacy, cultural competency, diversity and equity, the grant partners and teams have outlined a bold vision to reform teacher preparation. The vision involves using unique and innovative approaches within the learning to teach continuum which is seen as a sustainable professional journey rather than attaining licensure as a destination. Thus the grant has, according to the TQP (2011, p. 1), outlined the following core components that include:

(a) curricula for science, math, or special education that focus on scientifically supported teaching and learning methodologies, including the use of technology;
(b) clinical experiences that serve as a continuous core and culmination of professional preparation;
(c) case-based approaches that complement concurrent field experiences, and
(d) ongoing professional development for teacher education faculty, teacher candidates, and pre-K-12 educators and administrators.

Focus throughout this paper will be on examining data collected from EDVENTION fellow participants in one of the teacher education programs at one of the participating campuses. The approach taken at this campus will be highlighted in terms of reform efforts within the context of the grant’s goals and expected outcomes.

Theoretical Framework

Teacher preparation has been largely influenced by several conceptual frameworks and philosophical underpinnings. This study draws primarily on democratic teacher preparation constructs that build on pluralism, equity and social justice (Banks, 1995; Ladson-Billings, 1995; Nieto & Bode 2008; Darling-Hammond, 2009). In addition, it capitalizes on the notion that a delicate balance between teachers’ conceptual awareness and professional skills is needed. Additionally, promoting teacher efficacy and readiness is key in increasing student achievement in schools (Grossman, 1990; Gay, 1995). This can be achieved by constructing relevant knowledge, integrating equitable and culturally responsive equity pedagogy, sensitizing participants to the democratic and pluralistic cultures of schools and society, and instilling professional values and global competency in teachers and students (Banks, 2007; Darling-Hammond, 2006; Darling-Hammond et al 2008; Gay, 1995; Garcia, 1991; Nieto & Bode, 2008). This requires a comprehensive approach and multi-dimensional process to ensure acquisition of relevant conceptual knowledge and develop effective professional skills to meet
the growing demands to reform schools especially in times of constant change (Hopkins, 1995; Hollingsworth, 1997; Lieberman, Saxl, & Miles, 2000; Fullan, 2007).

It is imperative then to provide multiple learning opportunities to teacher candidates so that they become culturally responsive to the needs of all students. In fact, education reformists (e.g. Banks, 2007; Goodlad, 1990, 1996; Goodlad et al, 1990, 1996; Marzano, 2005) have always seen teacher empowerment as a precursor for maximizing teacher instructional leadership roles and student learning outcomes (Gupton, 1995). Additionally, the paper draws on the current framework that seeks to enhance the roles of teachers as professional instructional leaders in the changing world. Despite the “change wars” and competing arguments and frameworks (Hargreaves & Fullan, 2009), there seems to be a consensus that teacher efficacy and quality teacher education are key to transforming schools and bringing about the desired change (Hargreaves, 1994, 2004; Fullan, 2008; Hargreaves & Fullan, 2012; Darling-Hammond, 2006; Soodakn & Podell, 1997; Wasley, 1991). In fact, Darling-Hammond’s (2009, p. 45) professionalism hypothesis echoes such imperative to “invest” in teachers and enhance their instructional leadership roles since almost “all countries are engaged in serious school reform initiatives to address demands for much higher levels of education for a much greater number of citizens—demands created by a new information age” and geopolitical forces and shifts around the world.

Consistent with the multicultural construct, the professional conception of teaching and teacher preparation serves as an approach, suggested by Darling-Hammond’s (2009), that is “knowledge-based and client-oriented” in which teacher educators join forces with other partners to meet the diverse needs of all students. This can be accomplished through sustainable efforts to implement “rigorous preparation and socialization” as well as providing professional learning opportunities for prospective teachers and others to reform schools through teacher efficacy and quality teacher preparation.

Purpose of the Study and Research Questions

Since reforming teacher education is the primary focus of the program functions and activities, the purpose of the study is to examine the impact of professional learning on teacher candidates’ self-efficacy and professional development. In addition, the study examines the following research questions:

1. What is the effect of participants’ engagements in professional learning activities and community of practice?
2. What are some of the factors that contribute to enhanced teacher quality that affect teaching and learning outcomes in schools?
3. What are some of the strategies to integrate reform elements to enhance teacher preparation programs?

Participants

All participants who attend the teacher education program are at the pre-service stage in their professional and academic journeys. They reflect a proportionately sizable sample of teacher candidates (teacher education fellows) in all three basic credential programs (Elementary, Secondary, and Special Education) at one of the participating TQP institutions. After participating in each grant-related activity, they are required to complete a survey about how the each professional learning activity has impacted their knowledge and skill based in
becoming effective teachers. The survey instruments incorporated teacher education reform elements and key domains related to teacher quality and self-efficacy. In addition, throughout their program (including coursework and field experiences), teacher candidates are assessed at multiple stages within the prescribed assessment instruments in their respective credential tracks. They complete a series of field experiences, performance based assessments, multiple anchor signature activities…and other measurable indicators that are regularly collected and analyzed to monitor their efficacy.

Research Design and Methodology

One of the most appealing research genres in educational research is action research given its flexible nature and pragmatic goals. Action researchers seek to follow a systematic process of understanding internal and external influences that can impact reform efforts and outcomes (Lewin, 1946, 1947, 1948; Corey, 1954; Kemmis, 1983; Kemmis & McTaggart, 1988; Sagor, 1992; Noffke, 1995; Mills, 2006, Glanz, 2003). In addition, as a living practice action research for educational change and renewal (Elliot, 1993; Park et al, 1993; Carson & Sumara, 1997), it seeks to promote an understanding of “what’s happening” at school and “decide how to make it a better place” (Calhoun, 1994, p. 20). The assumptions that underlie the process of engaging in action research have been conceptualized by Deschler & Ewert (1995) who outlined some philosophical underpinnings that include:

1. Action research will improve practice through scientific problem solving;
2. Teachers and other educational practitioners are central to the research process;
3. The research follows a flexible and inductive process;
4. The process requires a link between reflection and action;
5. Theory and practice can be linked through action research;
6. The research is focused on a single unique situation;
7. Methods are eclectic and innovative to specific situations.

Conceptualizing action research in diverse and urban settings, EdChange Multicultural Pavilion provides a nice synthesis of how Teacher Action Research (TAR) that can serve as model for achieving equity and promoting quality in education including teaching and learning outcomes. The process of Teacher Action Research (TAR) is “an evaluation method designed to engage educational practitioners in the assessment and improvement of their own practice. It can be an individual tool, helping classroom teachers to reconsider their teaching methods or to adapt in order to solve a problem. It can also be a community activity, helping teams of educators to assess problems in schools, enact changes, and reassess.” Moreover, while the action research process varies from one context to another, it is, in general:

- a non-traditional and community-based form of educational evaluation;
- carried out by educators, not outside researchers or evaluators;
- focused on improving teaching and learning, but also social and environmental factors that affect the nature and success of teaching and learning;
- formative, not summative—an on-going process of evaluation, recommendation, practice, reflection, and reevaluation; and
- change-oriented, and undertaken with the assumption that change is needed in a given context.

(adapted from: http://www.edchange.org/multicultural/tar.html)

This study builds upon the premise of action research procedures and cycles as a viable approach to collect and interpret the data from multiple sources. In addition, it takes into the
account the unique context of teacher preparation in terms of the postulated context-bound logic models and their intended outcomes.

**Data Collection, Analysis and Discussion of Findings**

The data were collected and analyzed based on the action research techniques and procedures. The common spiral and cyclical approach, as postulated by Lewin (1948), Kimmis (1990), Mills (2002), which includes planning, execution, action steps, monitoring, reflecting, rethinking, and evaluation was utilized in this study. This involved filtering information and significant trends and themes using the action research funnel proposed by Calhoun (1994) as the following figure illustrates:

Figure 3

*Funnel Action Research Approach (Calhoun, 1994)*

This study also builds on the action research processes to collect data from multiple sources both qualitatively and quantitatively. This includes field notes, focus group discussions, reviewing current literature and research, collecting surveys, ethnographic data...etc. within and outside the program and its host institution. In addition, data sources include collecting teacher education faculty, subject matter faculty, county office personnel and induction consortia participants among others.
Within the context of the grant goals and functions, the action research based steps were used. The following table illustrates the various stages that underlie actionable reform strategies along with the process of collecting and analyzing data.

Table 1

**Actionable Reform Cycle and Strategies**

<table>
<thead>
<tr>
<th>Stage 1: Fact-finding and Planning</th>
<th>Stage 2: Collecting and Analyzing Data</th>
<th>Stage 3: Reflecting and Taking Action</th>
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<tbody>
<tr>
<td>• Identifying key partners</td>
<td>• Using multiple sources</td>
<td>• Advisory groups</td>
</tr>
<tr>
<td>• Examining internal and external factors</td>
<td>• Conducting surveys</td>
<td>• Regular LOUs</td>
</tr>
<tr>
<td>• Examining the program contexts</td>
<td>• Focus groups</td>
<td>• Focus group discussions</td>
</tr>
<tr>
<td>• Forming professional teams</td>
<td>• Case studies</td>
<td>• Developing action plans</td>
</tr>
<tr>
<td>• Establishing calendars and timelines</td>
<td>• Interviews and anecdotal records</td>
<td>• Program retreats</td>
</tr>
<tr>
<td>• Recruiting participants</td>
<td>• Ethnographic data</td>
<td>• Departmental meetings</td>
</tr>
<tr>
<td>• Examining existing data</td>
<td>• Site visits and observations</td>
<td>• Induction consortia forums</td>
</tr>
<tr>
<td>• Reviewing programs strengths and areas of need</td>
<td>• Microteaching and internships</td>
<td>• Reflective logs and portfolios</td>
</tr>
<tr>
<td>• Reviewing relevant research and literature</td>
<td>• Needs assessments and identifying the professional needs of participants</td>
<td>• Key note speakers</td>
</tr>
<tr>
<td></td>
<td>• Curriculum alignment charts and matrices</td>
<td>• Interdepartmental meetings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Intradepartmental meetings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Partnership events and workshops</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sustainability plans</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Future research</td>
</tr>
</tbody>
</table>

In order to establish goals for enhancing teacher preparation programs, the contextual aspects along with external and internal factors should be understood. Initially, program personnel, school partners and stakeholders conducted a series of exploratory meetings to outline a contingency for effective teacher preparation in light of the key elements to reform teacher preparation programs. These elements involve a wide range of needs-based aspects such as the need for more integration of culturally responsive pedagogies especially to meet the needs of English language learners (ELLs) and special needs students. Other aspects of reform included the integration of Universal Design of Learning, academic literacy and language across the curriculum, integrating technology and multimedia training, multiculturalism and global literacy, field experiences and co-teaching models, the Common Core State Standards (CCSS), among other burning issues that impact teacher training (e.g. bullying, job readiness, interview skills, professionalism…etc.). These elements are seen as added elements necessary for maximizing opportunities for candidates’ efficacy in teacher preparation programs. More importantly, these elements are areas of “collective interest” (Calhoun, 1994; Mills, 2002) among teacher candidates, teacher educators, county offices of education personnel, site administrates, system and state stakeholders and others.

To ensure continuity of professional learning engagement and program improvement efforts to reform teacher education, it is necessary to maintain an on-going and sustainable actions (Hargreaves & Goodson, 2006; Hargreaves, 2007). These involve integrating a “continually recycling set of activities” (Stinger, 1996, cited in Mills, 2002, p.17) to promote effective practice and identify program gaps and areas of improvement. The cycle of activities also involves multiple layers of data sets and mechanisms ranging from program evaluation and assessment mechanisms to accountability measures as prescribed by state and national
Table 1
Reform Elements Professional Learning Series Sample

<table>
<thead>
<tr>
<th>Professional Development</th>
<th>Reform Element</th>
<th>Frequency of PD 2012-2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Literacy</td>
<td>• Differentiated Instruction</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>• Culturally Responsive Teaching</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Academic Literacy/emergent readers</td>
<td></td>
</tr>
<tr>
<td>Co-Teaching</td>
<td>• Supervision of year-long clinical experience</td>
<td>6</td>
</tr>
<tr>
<td>Job Readiness</td>
<td>• Student achievement data to improve instruction</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>• Alignment of program admission standards with Local Education Authority (LEA) needs</td>
<td></td>
</tr>
<tr>
<td>Classroom Management/</td>
<td>• Positive behavioral interventions and support strategies</td>
<td>4</td>
</tr>
<tr>
<td>Bully Prevention</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iPad/Social Media/Google training/ Video Modules/ Kern CUE</td>
<td>• Research based teaching practices, including technology</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>• Student achievement data to improve instruction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Differentiated Instruction</td>
<td></td>
</tr>
<tr>
<td>Universal Design for</td>
<td>• Universal Design for Learning (UDL)</td>
<td>4</td>
</tr>
<tr>
<td>Learning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EL Secondary Network/ EL</td>
<td>• Theoretical and clinical experiences addressing EL students in rural settings</td>
<td>8</td>
</tr>
<tr>
<td>Strategies/ Diverse</td>
<td>• Culturally Responsive Teaching</td>
<td></td>
</tr>
<tr>
<td>Classrooms</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
importantly, they should be an area of interest to everyone involved. In consultation and collaboration with key partners within the induction consortium, the local education agencies, interdepartmental teams, teacher educators are able to better plan and implement such professional learning opportunities. For instance, integrating and focusing on the Common Core State Standards within each reform element, the following table provides a sample of the area and frequency of the professional development during the academic year 2012-2013. It was intended to attract about 270 candidates in one institution; 192 candidates were active Edvention fellows who participated in all professional developments offered.

It should be pointed out that planning of activities and data collection occur simultaneously given the flexibility of the action research process. Each professional learning activity is assessed and evaluated. Participants also respond to a series of surveys after they have participated in the professional development series. At the same time, evaluation and assessments of the teacher candidates (fellows) occur internally and externally to establish lines of evidence about the impact on their self-efficacy. The multiple measures at the program level range from collecting signature assignments throughout the program’s coursework and field experiences to using assessment mechanisms, such as measuring the candidates’ knowledge and pedagogical skills through the Teacher Performance Assessments (TPAs), and pertinent Teacher Performance Expectations (TPEs) elements and categories. Additionally, candidates’ are monitored beyond the teacher preparation program through a series of surveys and interviews with teachers and site administrators who have observed the performance of newly hired candidates at their school sites. A composite of findings across the program’s assessment and evaluation system is reflected in Table 2 below which synthesizes some of the trends in relation to few targeted reform elements to promote teacher efficacy.

Table 2
**Effects of Edvention Reforms on Outcomes of Teacher Preparation Programs at one of the Participating Campuses**

<table>
<thead>
<tr>
<th>Reform Element</th>
<th>Reports by first year teachers</th>
<th>Reports by site-level supervisors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-Edvention Teachers</td>
<td>Early Edvention Teachers</td>
</tr>
<tr>
<td>• Teaching English language learners</td>
<td>71%</td>
<td>85%</td>
</tr>
<tr>
<td>• Culturally responsive pedagogy</td>
<td>58%</td>
<td>73%</td>
</tr>
<tr>
<td>• Universal Design for Learning</td>
<td>21%</td>
<td>51%</td>
</tr>
<tr>
<td>• Instructional technologies in classroom teaching</td>
<td>65%</td>
<td>77%</td>
</tr>
<tr>
<td>• Professional learning community</td>
<td>60%</td>
<td>75%</td>
</tr>
<tr>
<td>• Teaching in rural schools</td>
<td>47%</td>
<td>48%</td>
</tr>
</tbody>
</table>
Data findings reflect positive outcomes based on the candidates’ regular participation in professional learning series. The increase is also associated to the fact that candidates also complete the coursework and field experiences that mostly integrate key reform elements in their respective credential program. Also, the data collected on the candidates’ passage rates for their Teacher Performance Assessments (TPAs) reflect higher percentages among candidates (about 91% overall passage rate). It is worth noting that the successful completion of the TPAs largely hinges on a wide range of candidates’ abilities and skills within each domain and element of effective learning and teaching. Similar results in the exit surveys and unit operation surveys provide further evidence about the impact of professional learning and curriculum enhancement on teacher candidates’ self efficacy. In addition, program modifications, changes, and adjustments are continually integrated and informed by data findings across the various programmatic assessment systems and anchor evaluation activities.

Other sources of data such as open ended responses, anecdotal records, reflection logs and portfolios provide further evidence about an increase in candidates’ knowledge and professional skills. Recurrent themes from qualitative data indicate an increase in candidates’ conceptual knowledge about the realities of schools, diverse nature of student populations, learning and teaching strategies conducive to the needs of ELLs, emergent readers and writers, and special needs students. They also reflect developing professional educational jargon in their reflective thoughts and open ended responses as they used such vocabulary as accountability, adaptations, modifications, ELD, SDAIE, affective filter, high expectations, UDL, PLCs, academic language, functional language, standards based learning and teaching including CCSS, rubrics, common underlying proficiency, differentiation, critical thinking, Higher Order Thinking Skills (HOTS), critical literacy, metacognition, power teaching, co-teaching, engagement, realia and many others.

While the evidence suggests encouraging trends, the remaining task is to sustain efforts to continue taking efficacy to the next level. This commitment is reflected by faculty and personnel in the teacher preparation programs who are also Edvention participants. Sustainability plans are in placed are carefully revised as conditions dictate.

**Conclusions and Implications**

Teacher efficacy is a critical ingredient for school reform efforts. Investing in teacher candidates and teachers is equally important to investing in students in the educational system. Undoubtedly teacher efficacy can be enhanced by quality programs and professional engagements in communities of practice. In turn, student learning outcomes can be increased when teachers integrate innovative approaches gleaned from their training and professional communities.

There are several factors that can contribute to teacher quality and effectiveness. The traditional wisdom teaches us that effective teachers are the byproduct of rich and rigorous preparation. Well-planned programs have scrupulous benchmarks for building foundational knowledge and professional skills. Moreover, the scope and sequence of teacher education programs should be based on research and experience. But that in itself is not sufficient for teacher efficacy. Rather, participatory action-oriented approaches should be considered.

Equity and quality are intertwined in teacher preparation. Who the learners in schools are should be the axiom upon which how teachers are trained. The premise of pluralism should be the driving force for planning and implementing teacher education programs. As such, they should be dynamic and evolving as well as responsive to the ecological and socio-cultural
conditions in schools. Culturally responsive practices should be the rule rather than the exception in teacher education programs.

Professional learning and development opportunities should be purposefully and systematically infused in teacher preparation programs. Drive-by professional opportunities tend to be counterproductive and less meaningful let alone non-sustainable. Consequently, the purpose of reforming teacher education is far-reaching and involves continual collaboration, evaluation, and improvements. At the same time it requires sustaining efforts by all partners in order to ensure that quality programs continue to survive and thrive.
References


