Supporting the Development of Effective Teachers: A Case for the Formation of Collaborative Partnerships in the Development of a Clinical Model

Bonnie Lee Rabe

Department of Education and Educational Psychology 181 White Street, Danbury, CT USA Tel: 1-203-634-1083 E-mail: rabeb@wcsu.edu

Abstract

This essay focuses on the development of effective teachers through the development of an embedded clinical model in a teacher preparation program. An Extended Professional Learning Community magnifies the partnership comprised of teaching universities and public school districts. By carefully attending to the five disciplines of effective learning organizations outlined by Senge, this shift in practice may be accelerated and the growth of the learning organization enhanced. As teacher preparation programs shift toward embedding the medical clinical model into their programs, masterful teacher practitioners contributing to such programs are also stimulated, influencing more effective teaching practice

Keywords: Clinical practice, medical clinical model, collaborative partnerships, pre-service teaching

1. Background

Criticism of traditional schooling has mounted steadily since *A Nation At Risk: The Imperative for Educational Reform, an open letter to the American People*, released by The National Commission on Excellence in Education in 1983. "Our society and its educational institutions seem to have lost sight of the basic purposes of schooling, and of the high expectations and disciplined effort needed to attain them". The findings of the Commission focused on content, expectations, time, and teaching.

In the 4 decades since that publication, some progress has been made in these focus areas. Common Core State Standards have been developed in Literacy and Math, with Science right behind them. Expectations are reflected in raising the bar for all students in the 21st Century Skills initiatives. Learning is becoming more grounded in research, as the work of Elmore, Darling-Hammond, Marzano, Reeves, Allington, McNulty, Pickering, Pollock, Waters, Freiberg, Simpson, and a host of other researchers have become commonly studied and their theories and strategies applied in public schools by current practitioners across the nation. Some public, charter, and magnet schools are exploring extending school days and school years, becoming creative with learning time.

2. The Medical Clinical Model: Paradigm Shift Toward Embedded Practice

Various case studies of effective teacher educations programs (Darling-Hammond, 2006; Zeichner, 1993), have found that powerful teacher education programs have the usual didactic curriculum (lecture and textbook instruction) as well as a clinical curriculum. Candidates are taught to use professional teaching standards to apply what they are learning into practice, followed by systemic reflection on their actions and student learning. "One thing that is clear from current studies of strong programs is that learning to practice in practice, with expert guidance, is essential to becoming a great teacher of students with a wide range of needs." (Darling-Hammond, 2010, p. 40).

The most powerful programs teacher education programs require students to spend extensive time in the field throughout the entire program. Often these programs, which are similar to the medical clinical models in teaching hospitals, require at least a full academic year of field work with a masterful teacher or team of teachers, modeling expert teaching with diverse learners. Candidates partner with masterful teachers while they are completing coursework at the university.

Masterful teachers, as a result of these experiences, become pivotal in the development of meaningful professional development for their own districts working with university faculty. School-based faculty also will often teach in the teacher education program and many are trained to become teacher educators. As the responsibility for the classroom

instruction moves to the candidates, opportunities open to focus their teaching on the learner, diagnosing their needs, adaptations instruction to their needs, assessment of the students' progress over time and applying a complex repertoire of strategies to practice in practice, with expert guidance.

According to the National Council on Accreditation of Teacher Education (NCATE) "enhanced clinical preparation should give aspiring teachers the opportunity to integrate theory with practice; develop and test classroom management and pedagogical skills; hone their use of evidence in making professional decisions about practice; and understand and integrate the standards of their professional community".

Clinical experiences, therefore, also give the university and partner districts the opportunity to observe and document candidate's dispositions, always difficult to measure.

In the American Association of Colleges for Teacher Education (AACTE) 2010 policy brief, The Clinical Preparation of Teachers, the case for clinical practice is related to student achievement, teacher retention, and other important candidate issues. This report focuses in on prospective teachers, "...particularly career changers—want and seek out clinical opportunities. Research shows the importance of strong clinical practice to student achievement, teacher retention, and teachers' sense of preparedness when they enter the classroom".

The National Council for Accreditation of Teacher Education (NCATE) also released its Blue Ribbon Report in 2010, Transforming Teacher Education through Clinical Practice: A National Strategy to Prepare Effective Teachers. The Blue Ribbon Panel on Clinical Preparation and Partnerships for Improved Student Learning was comprised of state officials, P-12 and higher education leaders, teachers, teacher educators, union representatives, and critics of teacher education. This report highlighted the American Association of Colleges of Teacher Education (AACTE) recent profile of extensive clinical work underway in 67 colleges of education and makes the case for teacher preparation programs shift toward a clinical practice model.

Clinically based approaches have numerous advantages over the traditional practica of observation and student teaching at the end of the preservice training. The panel calls for teacher education preparation programs and school districts to share the responsibility for teacher education with clinically based programs having the commitment and support of all stakeholders.

The panel also addressed the gap between how teachers are prepared and what schools need. As part of this effort, the panel identified 10 design principles for clinically based programs and a comprehensive series of strategies to revolutionize teacher education by issuing a systemic challenge directed at all teacher training institutions and all schools – public and private, "The education of teachers in the United States needs to be turned upside down" (p. ii); and concludes with a challenge to action,

3. Customizing the Medical Clinical Model to the Learning Organization

The university, located in, an ethically and economically diverse community in the northeastern United States, began looking at the medical clinical model as a result of two events: Becoming nationally accredited by the National Council for Accreditation of Teacher Education (NCATE) and a challenge issued by the superintendent of one of the partner districts. National accreditation brings with it the responsibility to remain "cutting edge" as the university plans for re-accreditation in the form of the continuous improvement option. The superintendent challenge was based on data collected by the district on the quality of their teacher preparation related to the reality of teaching, as reported by teachers in their first three years of practice and the masterful teachers working with them. The second partner district, a racially and economically integrated urban community (the home of the university), is a strong supporter of the university programs, providing a rich culture and quality programming in which the candidates train.

Senge, in The Fifth Discipline: The Art and Practice of The Learning Organization (2006), defines a learning organization as "... continually expanding its capacity to create the future" (p.14). Senge also identified five component technologies are gradually converging to innovate learning organizations: Systems thinking, personal mastery, mental models, team learning, and personal mastery (p. 6-10). The fifth discipline, systems thinking, integrates the other four disciplines, fusing them together an inter-related, functional whole.

How do a teaching university and the surrounding district(s) begin the process of creating a real partnership, an extended professional learning community, providing powerful clinical preparation for the preservice teacher? It all begins with the development of personal mastery and a vision?

3.1 Personal Mastery

Although the development of the five disciplines can begin at various levels, it makes sense to begin with personal mastery. The simple fact that you are reading this article may infer that you are a person who is concerned with the development of personal mastery. The process of attaining personal mastery infers continually clarifying and deepening the personal vision, focusing energies, developing patience with others as we experience new learning, and then remaining objective about seeing reality objectively. "An organization's commitment to and capacity for learning can be no greater than that of its members." (p. 7).

Leadership and administrative support is important to this entire process. In order to promote a shift in thinking to clinical practice in teacher education, a core group of educators from the university and partner districts should be recruited to broaden their personal mastery with regard to the shift to clinical practice. It may help to have a consultant work with this core group as they review the research, investigate various models, and share their findings by begin the dialogue with their respective faculties as their own personal vision goes through a transformation.

In practice, educational faculty from the university and two local urban and suburban partner districts, joined together in transforming the elementary teacher education certification program into a more appropriate elementary education interdisciplinary model. The State Department of Education was, at the time, in the process of passing dramatic teacher certification legislation. The synergy created by the recent national accreditation by NCATE, the challenge from the partner superintendent, as well as the first major State change in teacher certification in more than 4 decades, created the opportunity to address personal.

Getting faculty on board to reach fidelity can be tricky when people feel their long-time opinions about learning and teaching are challenged. The development of personal mastery requires careful exposure to research and examples in practice, allowing faculty opportunities to think about their own thinking, and opportunities to explore their own beliefs about learning and teaching. At the university this was accomplished by confronting the realities that we were not fully meeting the needs of our candidates and the districts we serve. Taking the lead, the education department, with the aid of a consultant, identified key research that would be shared with members of the educational unit to begin the dialogue about the shift to an interdisciplinary model with embedded clinical experiences beginning earlier in the program.

3.2 Team Learning

Team learning within a learning organization begins with an open dialogue. The word dialogue comes from the Greek, dia-logos, "...a free flowing of meaning through a group, allowing the group to discover insights not attainable individually" (Senge, 2006, p. 10). Discussion and dialogue are not synonymous. Dialogue builds, scaffolds, yet also requires the participants to learn patterns in teams which undermine learning. Defensiveness is a human condition. If these patterns which undermine learning are bravely acknowledged as they surface and dealt with, the teams learn. The members of the team acknowledge a common vocabulary through their set of experiences and dialogue, developing a common way of thinking or a "group think".

The selection of participants in the team which is guiding the imitative is crucial. However, past practice and resistance to change can stall the momentum and progress of a team.

In 2010, Farkas and Duffett, commissioned by the FDR Group, Thomas B. Fordham Institute, released Cracks in the Ivory Tower: The Views of Education Professors Circa 2010. This was the second study done of professors' opinions and views of teaching. The original survey and focus groups, completed in 1997, was also developed by the same authors. The 2010 study was based on a nationwide, randomly selected sample of 716 teacher educators in four-year colleges and universities, with follow-up focus groups. The study asked our nation's teacher educators for their perspectives on the pressing questions surrounding teacher education and school reform today. With such divergent thinking among the national professorate, the need to explore personal mastery relevant to clinical practice is obvious.

Universities historically embrace academic freedom and see detailed curricula goals as a threat to academic freedom. According to the American Heritage Dictionary, academic freedom is "liberty to teach, pursue, and discuss knowledge without restriction or interference, as by school or public officials". Thus the concept of academic freedom is in conflict with national education initiatives.

With prevailing attitudes such as these, the progressive formation of personal mastery and team learning is a crucial backdrop to the shifting paradigm toward clinical practice. Members of a team must be aligned to avoid wasting energy. There needs to be a common purpose, a shared vision, and an understanding how to support and compliment the efforts of team members. Confronting shifting beliefs and the realities of the classrooms of today, will allow the team to make honest progress. An effective team explores insights about complex issues; participates in innovative, coordinated action; at the same time each team member plays a role to "seed" other teams as the initiative expands.

In practice, team learning may take many forms. Data collection, smart data collection, is key. For example, public school districts can identify the gaps in teacher preparation by interviewing their new teachers and the masterful teachers working with them.

One of the most significant data sources came from a suburban partner district. The district held two focus groups in the Fall of 2009: One for teachers in years 1 to 3 of teaching and the other for the masterful teachers working with them. The new teachers had graduated from several universities, both public and private, mostly in the northeast. The questions asked in the focus groups were similar. The dialogue time was limited to two hours. The dialogue from focus group was scripted, audio taped, and videotaped; transcribed, coded, and analyzed. Triangulation showed the data from the sources supported the results, increasing the validity. Key findings from these sessions had the potential to shake the very foundational beliefs of teacher preparation programming.

After coding the transcribed data, the following themes emerged from these novice teachers and their mentors describing their pre-service teacher preparation (Chesley & Jordan, 2012):

- We didn't understand what's required of a professional. There was universal agreement among the new teachers that they were not prepared for the stress of the contemporary classroom experience. Little emphasis was placed on the development of professional responsibilities and habits of mind. The novice teachers also needed to develop the knowledge and skills to become an active contributor to collaborative professional learning communities.
- We didn't know what we really need to know. The novice teachers reported they were not sufficiently prepared in content pedagogy in the areas of teaching reading. Elementary teachers also felt they had insufficient training in mathematics, science, and writing. Critical skills such as small group instructional strategies, re-teaching content when students don't get it, using daily formative assessments, and general diagnostic thinking, were lacking.
- We didn't really grasp the importance of classroom management. This category was no surprise, as classroom management is often an issue. Novice teachers and mentors reported they lacked fundamental, research-based strategies to manage classroom behaviors and how to use motivation rather than punishment. Respondents were highly critical of professors who have not been teaching in public schools for 20-plus years and called this a credibility gap. They noted the cooperating teachers during student teaching must be held to more rigorous accountability in communication skills; knowledge and use of research-based professional practices, behaviors, and attitudes. The new teachers were in agreement that student teaching should be in the fall so they could see how a teacher begins the year, before the culture was built.
- We needed to work with experienced teachers when planning for instruction. They all recognized the need to spend more time with masterful teachers. The way the new teachers were taught to write lesson plans was not practical. The new teachers saw the need for more experience with real teachers in real classrooms...time to observe modeling, planning, delivery and assessment. They felt that these experiences should start earlier than student teaching.
- We needed to better understand student engagement. All respondents commented on a genuine lack understanding and applying differentiated instructional practices. In fact, most instructional training that they did have was focused on differentiation by ability. Very little was explored on how to differentiate for the gifted and talented students.
- We needed to learn how to integrate technology in teaching. Teachers were not taught how to use the technology in their preservice training. Little or no instruction occurred using the various Standards for Technology in Education. Concepts found in the 21st Century Skills initiative were not taught.
- We needed to understand the use and management of student learning data. Assessment experiences the novice teachers had in their pre-service training wasn't practical or authentic. Rubrics were disconnected

from formative and summative assessment. They did not see the connection. The rubrics they created were not usable and were not linked to content Standards. The general consensus was the universities assumed the pre-service teachers are getting experience with analyzing student learning in the field in student teaching, but they did not.

• We needed much more experience in special learning situations. Most novice teachers had never seen a real Individualized Education Program (IEP) or a section 504 plan, protecting students with disabilities. They all agreed there was a gap in special education differentiation. Not one new teacher had any exposure to Response To Intervention (RTI), a comprehensive plan for the identification of learning and behavioral problems designed to improve instructional quality while providing all students with opportunities to succeed in school.

In this case of educational reform, the working in partnership (university and partner district), analyzed and synthesized the data collected from the focus groups along with other data. These data became the basis for curricular reform at the university and development of a series of clinical models to be developed and staffed collaboratively by the university and public school partners, beginning with the elementary education pre-service program.

From the various stakeholders promoting a shift in thinking to clinical practice in teacher education, a team of masterful educators were recruited to work with progressive university faculty as committee members, and begin the process of team learning. This committee, although facilitated by university faculty, includes various stakeholders from partner districts representing decision makers, curriculum developers, masterful teachers, and content specialists. This process developed the "common think" of the participants as they prepared to identify what form embedded clinical practice will take for the pre-service teachers. Meeting frequently and sharing personal mastery through honest open dialogue, the team developed their common vocabulary and began visioning.

3.3 Shared Vision

The positive progress in team learning allows that team to then continue the dialogue about a shared vision, based on the development of pictures of the future which exemplify the commitment to the learning organization of its' members.

A shared vision within an Extended Professional Learning Community provides the focus for learning. The building of a shared vision encourages people to consistently define and re-define their own vision. Personal mastery, an in-depth knowledge of related research, is key to developing a shared vision. Significant research should be identified and shared with members of the community. Discussions focus on how the research relates to practice.

When people strive to accomplish something that matters deeply to them, generative learning occurs.

Although many shared visions are extrinsic, "[a] shared vision, especially one that is intrinsic, uplifts people's aspirations." (Senge, 2006, p. 193). Shared vision promotes risk taking and experimentation, extremely important when participating in a shifting paradigm such as the implementation of a medical clinical model.

In practice, the university and the partner districts participated in dialogic discourse, the experience of talking together, sharing issues of their own personal mastery and they developed and learned as members of the team, are crucial components in the process of creating a shared vision. The clinical practice team also dialogued with another team working on the curricular re-design of the elementary education interdisciplinary model. In many ways they worked in tandem. In this sense the visioning process became collaborative.

3.4 Mental Models

The term mental models, is believed to have originated with Craik in his book The Nature of Explanation (1943). Mental models are based on the thought process about how something works in the real world. These mental models can be based on deeply ingrained assumptions, generalizations, or images that influence how we see the world around us. All stakeholders need to be afforded the opportunity to learn about the emerging research supporting the clinical model. At the university level, expect resistance. This is a dramatic change for faculty. Educators were trained in the old paradigm and during dramatic change, in the absence of strong leadership we revert to our former comfort levels.

The identification of key people in two forward thinking learning organizations, a university and a public school

district, sharing a common vision of the knowledge, skills, and dispositions necessary to be an effective teacher; then, as a result of effective and progressive team learning and personal mastery, they create new mental models together.

In practice the extended professional learning community created by this northeastern university and two local partners, one urban and one suburban, became one of shared decision making in the redesign of the elementary education interdisciplinary model. Information was shared by members of these two teams with the educational unit (comprised of education faculty from three Schools within the university), the university's Education Department, partner district administrators, and faculty. These sessions were more than updates; they sought input and feedback as the models evolved.

3.5 Systems Thinking

Tying it all together is the fifth discipline, systems thinking. By seeing the circles of causality, rather than the more common straight lines, we can better visualize the interrelationships which exist. As small changes occur, reinforcing feedback assures the continued growth. Processes must be balanced and we need to be able to read the processes. Therefore, systems thinking relies upon a long-term viewpoint. Delays and feedback loops are important to address, otherwise they can create havoc in the long term.

In many universities and school districts, Professional Development Schools or Professional Learning Communities provide support for learning in real-world settings. They are opportunities for immersion of our pre-service teachers into the world of learning.

Between 1995 and 2001 NCATE design tested standards for professional development schools (PDSs) with hundreds of practitioners and teacher educators. Draft standards, developed based on extensive input from experts in the field, provided guidance in a practitioner-based educational pre-service teacher experience. Professional development schools are innovative institutions formed through partnerships between professional education programs and P–12 schools. The PDS experience improves both the quality of teaching and student learning by focusing on the preparation of new teachers, faculty development, inquiry directed at the improvement of practice, and enhanced student achievement.

It is commonly accepted that Professional Learning Communities first developed in the 1960's. Little and McLaughlin (1983) identified characteristics of professional communities within effectively functioning departments. In 1995 Newmann and Wehlage identified restructuring tools that helped teachers in successful schools function as professional learning communities. Kruse, Louis, and Bryk (1995) reported their findings that schools that were effective in terms of student achievement, operated as professional learning communities characterized by: Reflective dialogue, de-privatization of practice, collective focus on student learning, collaboration, and shared norms and values. Professional Learning Communities at Work: Best Practices for Enhancing Student Achievement by DuFour and Eaker (1998) brought Professional Learning Communities mainstream.

Rosenholtz (1989) in a discussion of teaching quality, brought workplace factors into account. His premise was teachers were more committed and effective when they felt supported in their own learning and practice. Rosenholtz found that teachers who were most likely to adopt new classroom behaviors had a high sense of their own efficacy. They were also more likely to stay in the profession.

McLaughlin and Talbert (1993) confirmed Rosenholtz's findings, further suggesting when teachers had opportunities for collaborative inquiry, they were able to develop and share a body of wisdom from their experience. Darling-Hammond (1996) added that shared decision making is a factor in curriculum reform and the transformation of teaching roles.

Professional learning communities are described is a host of ways: A grade-level teaching team, a school committee, a high school department, an entire school district, a state department of education, a national professional organization,. DuFour (2004) feels the term has been used so ubiquitously that it is in danger of losing all meaning (p.6). In current jargon, professional learning communities take the form of data teams, structured by content or integrated teams, across grade a level or a vertical team.

In partnerships, where there are ongoing dialogues about teaching and learning, a new genre of university and school district partnerships are beginning to form, the Enhanced Professional Learning Community. In these communities teachers and pre-service teachers (candidates enrolled in teacher preparation programs) work

side-by-side in observing classroom practice, student work, and have conversations about what they see. Building on these professional learning communities, school districts should have increasing influence on what is being taught in these pre-service programs. School districts should partner with universities in identifying what changes need to be made through open and continuous dialogue, focus groups, and surveys; the results of which provide critical data utilized for the redesign.

4. Identifying the Core Curriculum: Preparing the Pre-service Teacher in the Urban Setting

Pre-service teachers need to accumulate experiences, developing a background in the social, political, and economic impact on the distribution of equal educational opportunities within urban schools. Viewing the urban educational experience through the contexts of historical, inequality, overcoming obstacles, and transformation; candidates should expand their understanding of the challenges of the urban setting and, through clinical, field and service experience firsthand the rewards of a career in this setting.

In preparing pre-service teaching candidates, how do universities know what they need to be successful in urban settings? In many cases, the coursework is based on tradition – what has always been taught. This approach is no longer acceptable. Instructional decisions need to be based on information collected from the field.

According to the Digest of Education Statistics, National Center for Education Statistics, in 2009 on a national level, fifteen percent of public school students attended school in a large city. Currently, in this state, seventy percent of the student population attends school in 15 districts, all of which are urban. In the current economic conditions, most of the job openings in the field are in urban districts. Teacher preparation programs must train pre-service teachers in the elements unique to urban schools.

The issues confronting urban schools are complex and extend beyond the normal range of typical teacher preparation programs. These issues are deeply mired in the social, economic, and political conditions of the urban environments in which they are located. Teachers entering an urban position face unique challenges and expectations. They need to have an understanding of the challenges of transferring their specific urban setting and be confident that the skills they developed during their clinical practice and student teaching.

There are specific topics which assist in the preparation of pre-service teachers for the urban setting. Urban teachers need a background in social (including race and class), political, and economic impact on the distribution of equal educational opportunities within urban schools. Educators planning to teach in an urban setting must develop knowledge of and an appreciation for the factors influencing educational reform as related to the social context.

5. Summary

Clinical models give aspiring teachers the opportunity to integrate theory with practice; develop and test classroom management and pedagogical skills; hone their use of evidence in making professional decisions about practice; and understand and integrate the standards of their professional community. These clinical settings also provide the opportunity for evaluating not only the knowledge and skills these candidates hold, but also addresses their dispositions, which were previously very difficult to measure.

In order to develop effective clinical practices embedded within teacher preparation programs, the programs must first be transformed to better address the needs of today's public schools. To successfully accomplish this transformation, teaching universities and public school districts develop a new type of learning organization, an Extended Professional Learning Community.

The NCATE Blue Ribbon Report, Transforming Teacher Education Through Clinical Practice (2010) concludes "[w]orking with clinical faculty from the university and the P-12 sector and with trained mentor teachers from their districts and other experts, the programs will help aspiring candidates respond to the challenge of teaching with integrity in the face of increasingly high standards." (p. 27).

School districts and universities can, through collaborative partnerships such as Extended Professional Learning Communities and interactive clinical experiences, better prepare pre-service teachers for careers in all classrooms, including the special challenges of the urban setting. The component technologies (systems thinking, personal mastery, mental models, team learning, and personal mastery) are converging with the fifth discipline, systems thinking, to innovate learning organizations fusing them together an inter-related and functional whole. By integrating these component technologies, the Extended Professional Learning Community can successfully effect a

paradigm shift by promoting, creating, and embedding clinical models into transformed teacher preparation programs.

A well-planned, research-based, pre-service teaching program with embedded clinical experiences where the candidates is working under the direction of a masterful teacher addresses the needs identified by novice teachers. This type of shift in program design and implementation will result in more effective teaching which, in turn, will impact student learning opportunities.

References

Alter, J. & Coggshall, J. (2009). Teaching as a clinical practice profession: Implications for teacher preparation and State policy. New York Comprehensive Center and National Commission Center for Teacher Quality.

American Association of Colleges for Teacher Education. (2010). The clinical preparation of teachers: A policy brief. Washington, DC: AACTE.

Chesley, G. & Jordan, J. (in press). A cry from beginning teachers ... "Change teacher preparation now!" Educational Leadership.

Darling-Hammond, L. (2006). Constructing 21st-century teacher education. Journal of Teacher Education, 57, 300–315.

Darling-Hammond, L. (2010). Teacher education and the American future. Journal of Teacher Education 61(1-2) 35–47.

Darling-Hammond, L., & Bransford, J. (Eds.). (2005). Preparing teachers for a changing world What teachers should learn and be able to do. San Francisco: Jossey-Bass.

DuFour, R. (2004). What is a "professional learning community"? Educational Leadership. 61(8) 6-11.

DuFour, R. & Eaker, R. (1998). Professional learning communities at work: Best practices for enhancing student achievement. Alexandria, VA: Association for Supervision and Curriculum Development.

Farkas, S. & Duffett, A. (2010). Cracks in the ivory tower: The views of education professors circa 2010. Washington, D.C.: Thomas B. Fordham Institute.

Kruse, S., Louis, K. S., & Bryk, A. S (1994). Building professional community in schools. Issues in Restructuring schools. Madison, WI: Wisconsin Center for Education Research.

Little, J. & McLaughlin, M. (1993). Teachers' Work: Individuals, Colleagues, and Contexts. New York: Teachers College Press.

National Council for Accreditation of Teacher Education (NCATE). (2010). Transforming teacher education through clinical practice: A national strategy to prepare effective teachers.

Newmann, F. M. and Associates. (1996). Authentic Achievement: Restructuring Schools for Intellectual Quality. San Francisco: Jossey-Bass.

Senge, P. (2006) The fifth discipline: The art and practice of the learning organization. New York: Doubleday.

Tomlinson, C. (2001). How to differentiate instruction in mixed-ability differentiated classrooms. (2 ed.). Alexandria, VA: Association for Supervision and Curriculum Development.

Vygotsky, L. (1978). Mind in society: The development of higher psychological processes. Cambridge, MA: Harvard University Press.

Zeichner, K. (1993). Traditions of practice in U.S. preservice teacher education programs. Teaching and Teacher Education, 9(1), 1-13.

This academic article was published by The International Institute for Science, Technology and Education (IISTE). The IISTE is a pioneer in the Open Access Publishing service based in the U.S. and Europe. The aim of the institute is Accelerating Global Knowledge Sharing.

More information about the publisher can be found in the IISTE's homepage: <u>http://www.iiste.org</u>

The IISTE is currently hosting more than 30 peer-reviewed academic journals and collaborating with academic institutions around the world. **Prospective authors of IISTE journals can find the submission instruction on the following page:** <u>http://www.iiste.org/Journals/</u>

The IISTE editorial team promises to the review and publish all the qualified submissions in a fast manner. All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Printed version of the journals is also available upon request of readers and authors.

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digtial Library, NewJour, Google Scholar

