

Annotated Bibliography: Specific Clinical Strategies

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Action Research: process in which participants examine their own educational practice systematically and carefully, with the intent that the research will inform and change his or her practices in the future

Ballard, S.D. (2015). Action research. *Knowledge Quest*, 43(3), 44-48.

A personal narrative is presented which explores the author's experience of how action research, as a tool of evidence-based practice, changed the culture of her school district in Londonderry, New Hampshire.

Mitchell, S.N., Reilly, R.C., & Logue, M.E. (2009). Benefits of collaborative action research for the beginning teacher. *Teaching and Teacher Education*, 25, 344-349.

In this paper, we argue that the best approach to professional development is through a collaborative action research model. By extending the partnerships established between student teachers, mentor teachers and university supervisors during student teaching into the beginning teachers' career, many of the everyday problems can be confronted within a supportive network. Several recommendations are offered for beginning and maintaining productive CAR relationships.

Shanks, J., Miller, L., & Rosendale, S. (2012). Action research in a Professional Development School setting to support teacher candidate self-efficacy. *SRATE Journal*, 21(2), 26-32.

This paper discusses preservice teachers' use of action research in a Professional Development School setting. Preservice teachers were placed in a PDS site that focuses on internationalizing education and on teaching languages. The teacher candidates were in charge of planning, teaching, and assessing language instruction in their classrooms. The preservice teachers implemented action research. The process helped them adjust to their teaching responsibility. They collected and reflected on their action research data, used it to understand their practice, and then made plans accordingly to improve their practice. This process was empowering and helped preservice teachers grow in their confidence and competence.

Coaching: Coaching occurs when a more knowledgeable professional works closely with another professional to increase productivity or to meet some predetermined outcome. The coach provides feedback. Coaching builds communities, develops a shared language and set of common understandings, provides a structure for the follow up to training, and is ideally a continuing process embedded in the organizational context of the school.

Collet, V.S. (2012). The gradual increase of responsibility model: Coaching for teacher change. *Literacy Research and Instruction, 51*(1), 27-47.

This study examines the gradual increase of responsibility (GIR) model for teacher coaching (Collet, 2008), an adaptation of Pearson and Gallagher's (1983) Gradual Release of Responsibility model. In GIR, instructional coaches model, make recommendations, ask probing questions, affirm teachers' appropriate decisions, and praise in order to provide decreasing scaffolding, which moves teachers toward interdependence and collaboration.

Graves Kretlow, A., & Bartholomew, C.C. (2010). Using coaching to improve the fidelity of evidence-based practices: A review of studies. *Teacher Education and Special Education, 33*(4), 279-299.

The authors conducted a comprehensive review of research to identify the impact of coaching on changes in preservice and in-service teachers' implementation of evidence-based practices. They identified a total of 13 studies from the 20 years of literature they searched. In general, coaching improved the extent to which teachers accurately implement evidence-based practices such as ClassWide Peer Tutoring, Direct Instruction, Learning Strategies, and Positive Behavior Support in classrooms or practicum settings. The retrieved studies also suggest that highly engaged, small-group initial training, followed by multiple observations, feedback, and modeling are critical components across coaching interventions. A few studies also provide promising data to support the consequential effects of coaching on improvements in student achievement. The authors offer suggestions for future research and practice related to preservice and in-service teacher training.

Lloyd, C.M., & Modlin, E.L. (2012). Coaching as a key component in teachers' professional development: Improving classroom practices in Head Start settings. OPRE Report 2012-4. *Administration for Children & Families*.

Head Start CARES (Classroom-based Approaches and Resources for Emotion and Social Skill Promotion) is a large-scale, national research demonstration that was designed to test the effects of a one-year program aimed at improving pre-kindergarteners' social and emotional readiness for school. To facilitate the delivery of the program, teachers attended training workshops and worked with coaches throughout the school year. This report focuses on the planning and implementation of the coaching component in the Head Start CARES demonstration. Beginning with an overview of coaching as a model of professional development generally and the demonstration's coaching model in particular, the report then offers practical lessons learned about coaching social-emotional curricula in a large

and complex early childhood education system. Geared toward early childhood education administrators and practitioners who are interested in adopting or modifying a coaching model, the lessons learned address the selection of the coaching model; coach hiring and training; coaching processes; coach support and supervision; and program management, data, and quality assurance.

Teemant, A., Wink, J., & Tyra, S. (2011). Effects of coaching on teacher use of sociocultural instructional practices. *Teaching and Teacher Education, 27*, 683-693.

This study evaluates a performance-based instructional coaching model intended to improve teacher pedagogy and classroom organization for educating diverse student populations. Elementary teachers (N = 21) participated in a 30-h workshop and seven individual coaching sessions across an academic year. The coaching model promoted use of the Standards for Effective Pedagogy, five research-based practices known to increase student achievement. Findings demonstrate performance-based instructional coaching led to statistically significant (a) improvements in teacher pedagogy, (b) patterns of teacher growth, and (c) changes in classroom organization. Implications for improving teachers' ultimate achievement, the coaching protocol, and research are addressed.

Cognitive Coaching: Cognitive coaching focuses on developing thoughtful, reflective practitioners who can “make changes in their own thinking and teaching processes,” emphasizes the development of trust between mentor and teacher, the engagement of the teacher’s higher cognitive functions, and gives teaching advice only indirectly to avoid judgment and evaluation and to promote trust and independent thinking.

Batt, E.G. (2010). Cognitive coaching: A critical phase in professional development. *Teaching & Teacher Education, 26*(4), 997-1005.

This documentary account describes professional development for teachers in the USA serving culturally and linguistically diverse students. The purpose of the project was to monitor effectiveness of training in Sheltered Instruction Observation Protocol (SIOP) and to assess the value of cognitive coaching. Quantitative and qualitative data sources were employed, including a knowledge test, surveys, and interviews. Findings indicated workshops were effective and produced strong commitment to the model, but resulted in a disappointing level of implementation without a coaching phase. Results illustrate the criticality of time allocation for cognitive coaching, and teachers articulate specific changes they made in their instruction.

Coaching: Rehearsals for Ambitious Teaching:

Lampert, M., Loef Franke, M., Kazemi, E., & Ghouseini, H. (May/June 2013). Keeping it complex: using rehearsals to support novice teacher learning of ambitious teaching. *Journal of Teacher Education*, 64(3).

We analyze a particular pedagogy for learning to interact productively with students and subject matter, which we call “rehearsal.” Our goal is to specify a way in which teacher educators (TEs) and novice teachers (NTs) can interact around teaching that is both embedded in practice and amenable to analysis. We address two main research questions: (a) What do TEs and NTs do together during the kind of rehearsals we have developed to prepare novices for the complex, interactive work of teaching? and (b) Where, in what they do, are there opportunities for NTs to learn to enact the principles, practices, and knowledge entailed in ambitious teaching? We detail what happens in rehearsals using quantitative and qualitative methods. We begin with the results of our quantitative analyses to characterize how typical rehearsals were structured and what was worked on. We then show how NTs and TEs worked together to enable novices to study principled practice through qualitative analyses of a particularly salient aspect of ambitious teaching, namely, eliciting and responding to students' performance.

Peer Coaching: a process in which teams of teachers regularly observe each other and provide support, feedback and assistance in order to help improve or refine instructional practice.

Britton, L.R., & Anderson, K.A. (2010). Peer coaching and pre-service teachers: Examining an underutilized concept. *Teaching and Teacher Education*, 26(2), 306-314.

The purpose of this study was to explore the effects of peer coaching on the classroom practices of pre-service teachers. Four teacher interns learned peer coaching functions and techniques before participating in coaching cycles with their peers. Pairs of participants reciprocally observed classes, collected data, and held conferences. Multiple forms of data were collected and analyses reveal that training was adequate. Findings show that peer coaching altered current teaching practices, but a trend of making suggestions for improvement without affirming strengths was also evident. Recommendations for integrating peer coaching in the pre-service curriculum are provided.

Lu, H.L. (2010). Research on peer coaching in preservice teacher education—A review of literature. *Teaching and Teacher Education*, 26(4), 748-753.

This study reviewed eight studies selected from the ERIC and Education Complete databases covering the years 1997 through 2007. The goals of this study were to identify similarities and differences of peer coaching and to examine its feasibility and challenges in preservice teacher education. The four similarities among the studies identified are (i) study participants, (ii) coaching relationships, (iii) coaching duration, and (iv) coaching strategies. The

differences identified were in relation to the following four areas: (i) the purposes of peer coaching, (ii) the nature of the field-based experiences of the programmes, (iii) the training for peer coaching, and (iv) the effects of peer coaching. Peer coaching appears to possess unique advantages and have much value for preservice teacher education. How barriers to the comprehensive recognition of peer coaching could be eliminated in preservice teacher education is also discussed.

Lynch, R., McNamara, P., & Seery, N. (2012). Promoting deep learning in a teacher education programme through self- and peer-assessment and feedback. *European Journal Of Teacher Education*, 35(2), 179-197.

The incorporation of self- and peer-assessment and feedback has significant potential as a pedagogical strategy to promote deep learning in project based coursework. This study examined the impact of a deeper approach to learning on pre-service teachers' critical thinking and metacognitive skills. It also examined the impact on student learning outcomes within a project based module with a significant design element. Forty-seven students participated in the pilot of an online peer feedback system. Results suggest that the quality of students' reflections through peer feedback and overall satisfaction with the module remained high despite students' citing a preference for instructor feedback. The data also indicate that the incorporation of self- and peer-assessment and feedback resulted in higher quality learning outcomes and enhanced critical thinking skills.

Slagter van Tryon, P.J., & Schwartz, C.S. (2012). A pre-service teacher training model with instructional technology graduate students as peer coaches to elementary pre-service teachers. *TechTrends: Linking Research and Practice to Improve Learning*, 56(6), 31-36.

This paper describes a peer coaching collaboration between graduate students in a Master's program in Instructional Technology and undergraduate pre-service teachers enrolled in an elementary mathematics methods course. Integrated as a major project in a graduate level K-12 technology integration course, the Instructional Technology students evaluated pre-service teachers' instructional web sites designed and built as a technology integration project incorporated into their existing elementary mathematics methods course. Instructional Technology graduate students provided support, feedback, and suggested revisions for undergraduates' instructional web sites, simulating work they might do in supporting practicing classroom teachers. Each student in each program was evaluated on the quality of his or her design and technology integration skills throughout the coaching experience. This paper includes a description of the development of the project, how it has evolved over time, benefits, and tips for getting started.

Trautwein, B., & Ammerman, S. (2010). From pedagogy to practice: Mentoring and reciprocal peer coaching for preservice teachers. *Volta Review*, 110(2), 191-206.

To facilitate early acquisition of effective teaching strategies, many deaf education teacher preparation programs provide students with opportunities to apply course concepts by working

with children in practicum or field experiences. Providing students with guidance and feedback regarding their teaching efforts is an integral component of these practica. Reciprocal peer coaching provides an effective means of sharing feedback when also paired with faculty mentoring of students. Program success is dependent upon the establishment of collegiality, teaching objectives/competencies, and critical evaluation of teaching methodology. This article describes a reciprocal peer coaching/mentoring program currently employed at the University of Texas Health Science Center at San Antonio listening and spoken language teacher preparation program.

Dialogue Journals: A private written conversation between a teacher and student that is interactive and conversational in tone and provides the opportunity for real student-teacher communication.

Camicia, S.P. & Read, S. (2011). Engaging public issues through dialogue journals: Pre-service teachers and elementary students read and respond. *Social Studies Research & Practice*, 6(1), 21-34.

In a qualitative study, 50 pre-service teachers were partnered with 50 elementary students to write each other in dialogue journals responding to texts on public issues. Based upon our analysis of the journals, written reflections from pre-service teachers, and interviews with the elementary teachers in the project, three findings emerged: student motivation for reading and writing increased, both types of students gained perspective consciousness, and elementary teachers found meaningful ways to integrate social studies with language arts. These findings suggest multiple avenues for future research surrounding dialogue journals, student engagement with public issues texts, and teacher education.

Graves, S. (2013). Using dialogue journals in mentoring relationships: Teacher candidates' and mentors' experiences. *MountainRise*, 8(2), 1-12.

Existing literature on the use of dialogue journals in teacher education highlights its relevance in facilitating teacher candidates' reflective thinking. There is little, if any, focus on the use of dialogue journals within the mentoring relationship, between teacher candidates and cooperating teachers, during field experience. Utilizing a phenomenological inquiry, the researcher sought to gain insight into teacher candidates' and mentors' experiences using dialogue journals during an early childhood practicum. Results reveal that teacher candidates' and mentors' experience using dialogue journals varied. While some participants reported that the dialogue journals were beneficial to their relationship, others did not see the same value.

Vojtková, N., & Collins, R. (2012). Using dialogue journals in an interdisciplinary university course. *Teacher Trainer: A Practical Journal for Those Who Train, Mentor & Educate TESOL Teachers*, 26(1), 21-24.

The article offers information on the use of dialogue journals by English student teachers (STs) in an interdisciplinary course at Masaryk University in Czech Republic. The dialogue journals are use

a way to conduct a formative evaluation of the course, develop the reflective and thinking skills of students, and to model a communicative activity. Moreover, a ST who used dialogue journals in teaching English to deaf students says that they are modern and easy way of improving English.

Journaling: prospective teacher's reflections designed to create analysis and generation of alternative strategies

Applebaum, L. (2014). *From whining to wondering: Reflective journaling with preservice educators. Journal of Jewish Education, 80(1), 5-23.*

Reflective journaling is frequently employed to help preservice educators make sense of fieldwork experiences. Analyzing the weekly journals of eight preservice educators, I offer conceptual language to describe how journal writing provides a window into students' capacity for reflection. This capacity is described in terms of three continua: self-awareness, sophistication of reflective writing style, and relationship of reflection to action. Noticing and articulating these continua allows those who train Jewish educators to see their programs as both professional training and a space for adult learning. Successful reflection requires both reflective skill and developmental capacity, making it complicated to assess and support growth. In Jewish education settings, this can be even more complex when students' own personal Jewish journeys intersect with professional learning.

Holly, M.L. (1984). *Keeping a personal-professional journal. Deakin University, Victoria 3217: Deakin University Press.*

"Writing to Grow" (ed. 1989) describes how keeping a journal can facilitate observation, documentation, and reflection on current and past experiences, including a teacher's life history and the social, historical, and educational conditions that usher in the present. The author provides examples from the diaries and journals of experienced educators and noted writers, revealing not only how but why writing seems to implant and connect thoughts and information.

Video-Aided Journaling

Bayat, M. (2010). *Use of dialogue journals and video-recording in early childhood teacher education. Journal of Early Childhood Teacher Education, 31(2), 159-172.*

This study utilizes students' journaling and video-recording of field experience teaching sessions as vehicles for inquiry into the development of the process of productive reflection within the piloting phase of an experimental course, designed by the National Center for Research on Early Childhood Education (NCRECE). The NCRECE course is designed to improve teachers' interactions

with children as well as their implementation of curricula to promote gains in children's social and academic development. The piloting of the NCRCEC course took place in the Winter Quarter of 2007 in a 4-year university in the Midwest United States. By guiding students to reflect on their actions through use of dialogue journals and video-recording, this action research aimed at scaffolding students' productive reflection. Students participating in the pilot course kept weekly journals with the instructor in an online dialogue format throughout the quarter. As a culminating activity, they video-recorded one language-based lesson in a preschool classroom and wrote a self-analysis of the lesson. The paper presented here is a report of a part of this study pertaining to the use of dialogue journals and videos in supervision of preservice early childhood teachers. It is hoped that this action research study will validate the concurrent use of journals and video case analyses as a means of promoting self-conscious productive reflections, and as an opportunity to clarify content knowledge and link theory to practice.

Calandra, B., Sun, Y., & Puvirajah, A. (2014). A new perspective on preservice teachers' video-aided reflection. *Journal of Digital Learning in Teacher Education, 30*(3), 104-109.

This article adds to the literature on video-aided professional development for teachers by presenting a schema-based framework for analyzing teachers' video-aided reflection on their own teaching. Qualitative analysis of two novice teachers' video-enhanced reflection was used to demonstrate how the framework could be used. Results emphasized the importance of participants' prior knowledge as a major influence on their ability to reflect. The authors contend that this is important because prior knowledge should determine the kind of guidance participants need in order to benefit most from video-aided reflection.

Falk-Ross, F.C. (2012). Media options: A comparison of preservice teachers' use of video, audio, and print journaling for reflective reading response. *Reflective Practice, 13*(1), 27-37.

Preservice teachers were provided with the choice of using print-based, audio, or video journaling to discuss content and connections to assigned reading material for an undergraduate class including weekly field experiences. Three students chose to use Flip Videos, and two students chose to use iPods provided by the educational technology department to record their responses. The nature of the video and audio journals differed qualitatively and quantitatively from the print-based ones, and all students had interesting comments about the new technology, providing insight into teacher education methods.

Krutka, D.G., Bergman, D.J., Flores, R., Mason, K., & Jack, A.R. (2014). Microblogging about teaching: Nurturing participatory cultures through collaborative online reflection with pre-service teachers, *Teaching and Teacher Education, 40*, 83-93.

Reflection is a cornerstone of most teacher education programs, but common practices have long been individualistic and this has become increasingly evident in an era when young people are participating in online cultures more than ever. Informal participation in digital affinity spaces could provide insights for more formal learning environments. We encouraged

collaborative reflection among 77 middle/secondary pre-service teachers using the closed social networking site Edmodo. While there were obstacles and ambiguities, findings indicated that our pre-service teachers found the site highly usable, appreciated the choice and influence afforded them through the medium, and grew as teacher-candidates from peer-to-peer interactions.

Lesson Study: A form of teacher-led professional development that focuses specifically on collaborative lesson planning as the primary means of learning from teaching, and, as such, seems a promising approach to meet the needs of preservice teachers as well. It involves a systematic and collaborative examination of instruction.

Amador, J., & Weiland, I. (2015). What preservice teachers and knowledgeable others professionally notice during lesson study. *Teacher Educator*, 50(2), 109-126.

The purpose of this study was to understand what preservice teachers and knowledgeable others professionally notice as they engaged in repeated cycles of a modified version of lesson study, as a component of a field experience in a teacher education program. The study also centered on comparing the professional noticing practices of preservice teachers with other lesson study participants, including classroom teachers and university facilitators. Data analyzed included videos of weekly lesson study analysis meetings for seven weeks for each of four teams. Each team included six preservice teachers, a classroom teacher, and a university facilitator. Findings indicate that preservice teachers primarily noticed elements about the classroom environment and teacher pedagogy, but included instances of noticing centered on students' mathematical thinking. In contrast, classroom teachers and university facilitators, as knowledgeable others, typically noticed general events and were less focused on students' mathematical thinking. Analysis of noticing trends over the seven weeks indicated that noticing levels remained steady initially, dropped in the fourth and fifth week, and resumed original status in the final weeks. Results that the preservice teachers' noticing comments were at higher levels than the knowledgeable others are contrary to other research studies and indicate that incorporating lesson study with appropriate scaffolds into a field experience for preservice teachers may be a viable option for encouraging noticing of students' mathematical thinking.

Fernández, M.L., & Robinson, M. (2006). Prospective teachers' perspectives on microteaching lesson study. *Education*, 127(2), 203-215.

Microteaching Lesson Study [MLS] is a cooperative learning experience that we felt could challenge our prospective teachers thinking about teaching and support their connection of theory and practice during an initial course on learning to teach mathematics. We studied seventy-four prospective teachers' perspectives on MLS over four sections of the course. MLS brings together cooperative groups of prospective teachers in cycles of planning, teaching, reflecting, and revising lessons. Findings from analysis of quantitative and qualitative data gathered through MLS Feedback Surveys and written reflective MLS reports revealed that our prospective teachers perceived MLS to be a worthwhile learning experience. In particular, they felt that most important about their learning through MLS was connecting theory to practice,

collaboration, and reflection. Participants appreciated applying in teaching what they were learning in the course. They valued the alternate points of view and feedback resulting from collaboration with their peers and recognized the benefits of reflection in learning to teach.

Myers, J. (2012). Lesson study as a means for facilitating preservice teacher reflectivity. *International Journal for the Scholarship of Teaching & Learning*, 6(1), 1-21.

This study sought to determine if, how, and the extent to which, the implementation of lesson study with preservice teachers facilitates reflection in its participants. The lesson study reports of 20 preservice teachers were analyzed qualitatively along three dimensions to determine what lesson study reports revealed about their reflections. More specifically, the analysis sought to determine what preservice teachers wrote about in their lesson study reports, and if it showed signs of reflectivity. The analysis revealed that the reflections of the participants, as evidenced within lesson study reports, resided at the lowest levels, thus supporting existing literature on the reflective abilities of preservice teachers. It also highlighted the difficulty of determining the degree to which individuals engage in reflective thinking. The results point to several considerations for those who wish to implement lesson study with preservice teachers, and identify numerous questions that warrant further investigation.

Rosaen, C.L., Carlisle, J.F., Mihocko, E., Melnick, A., & Johnson, J. (2013). Teachers learning from analysis of other teachers' reading lessons. *Teaching and Teacher Education*, 35, 170-184.

This study explores teachers' responses to a video-based multimedia program designed to reflect current views of effective professional development for practicing teachers. The Case Studies of Reading Lessons program engages teachers in analysis of others' reading instruction. Findings showed teachers' enthusiasm for studying authentic reading instruction but suggest mixed views of the benefits of questions used to guide analysis of instruction. Teachers reported making connections to their own reading instruction and provided evidence that analysis of reading lessons may contribute to reflective practice. Future studies might investigate long-term effects of systematic analysis of case studies to develop adaptive expertise.

Professional Learning Community: A community of professionals which fosters mutual cooperation, emotional support, and personal and professional growth as they work together to achieve what they cannot accomplish alone.

Bond, N. (2013). Developing a professional learning community among preservice teachers. *Current Issues in Education*, 16(2).

This action research study examined the development of a professional learning community (PLC) among 20 preservice secondary teachers as they met regularly during a semester-long, field-based education course to share artifacts of learning from their professional portfolios. The PLC model described by Hord and Tobia (2012) served as a

framework for the implementation of this collaborative approach. The findings indicated that some aspects of the preservice teachers' PLCs worked well while others did not. The participants enjoyed meeting with classmates, offering emotional support, and sharing their experiences from the university course and cooperating teachers' classes. However, they struggled with focusing attention on their high school students' learning, selecting a PLC leader, managing their time, and offering constructive feedback to other group members. The results suggest that the Hord and Tobia model of PLCs is useful and deserves further consideration from teacher educators working with preservice teachers.

Curry, M. (2008). Critical friends groups: The possibilities and limitations embedded in teacher professional communities aimed at instructional improvement and school reform. *Teachers College Record*, 110(4), 733-774.

This study builds upon research on teacher professional communities and high school restructuring reforms. It employs a conceptual framework that draws upon theories of "community of practice" and "community of learners." Purpose/Objective/Research Question/Focus of Study: This study analyzes how teachers' professional inquiry communities at the high school level constitute a resource for school reform and instructional improvement. Setting: This research focused on a reforming, comprehensive urban public high school with site-based management. Conclusions/Recommendations: The findings demonstrate how the enactment of design choices holds particular consequences for the nature and quality of teacher learning and school improvement. Although CFGs enhanced teachers' collegial relationships, their awareness of research-based practices and reforms, their schoolwide knowledge, and their capacity to undertake instructional improvement, these professional communities offered an inevitably partial combination of supports for teacher professional development. In particular, CFGs exerted minimal influence on teachers' pedagogical content knowledge. CFGs would benefit from regular and systematic metacognitive and process-oriented reflections to identify how their collaborative practices might optimally advance their "bottom line" goal of improving teacher practice to increase student achievement. Additionally, high schools might pursue multiple and complementary CFG-like professional development opportunities in subject matter departments and interdisciplinary grade-level academy teams.

DuFour, R., & Eaker, R. (1998). *Professional learning communities at work: Best practices for enhancing student achievement*. Bloomington, Indiana: National Educational Service.

This book offers recommendations for those who seek to transform their school into a professional learning community as characterized by an environment fostering mutual cooperation, emotional support, personal growth, and a synergy of efforts. References to and brief summaries of standards for curriculum, teacher preparation, school leadership, professional development programs, school-parent partnerships, and assessment practices are included along with sample vision statements. Chapter 1 provides an overview of reform efforts during the second half of the 20th century and emphasizes the Excellence Movement of the 1980s and Restructuring Movement of the 1990s. Chapter 2 contrasts the model of the

traditional school environment with that of a professional learning community. Chapter 3 examines the change process and contradictions found in the research. Chapters 4 and 5 examine the four building blocks: mission, vision, values, and goals. Chapter 6 emphasizes the value of communication in sustaining improvement initiatives. Chapter 7 discusses assimilation of change into the culture of a school. Chapter 8 discusses how curriculum is addressed, and the need for teacher participation. Chapters 9, 10, and 11 examine the roles of principals, teachers, and parents. Chapter 12 describes staff development practices. Chapter 13 stresses the need for patience and persistence when attempting change.

Kagle, M. (2014). Professional learning communities for pre-service teachers. *National Teacher Education Journal*, 7(2), 21-25.

While the use of professional learning communities (PLCs) as a tool for professional development is widespread among in-service teachers, the use of this approach has not been studied with pre-service teachers. This qualitative study addresses this gap in the literature and concludes that the use of PLCs, adapted to the needs of preservice teachers, is an effective means to build initial pedagogical skills, orient pre-service teachers toward becoming reflective practitioners, facilitate the transition between student and teacher, and confront the realities of classroom practice. Helping to instill professional culture in our schools is a concern of all teacher educators; using PLCs with our students can help us to achieve it.

Levine, T.H. (2011). Features and strategies of supervisor professional community as a means of improving the supervision of preservice teachers. *Teaching and Teacher Education*, 27, 930-941.

This article explores whether features associated with effective professional communities among K-12 teachers are relevant and sufficient for improving the practice of supervisors in teacher education programs. Interview and observational data from nineteen supervisors in one teacher education program illuminate what supervisors want in order to improve their professional practices and how their needs could be met through ongoing collaboration. The article proposes five features of professional communities that can help supervisors improve their work: norms promoting collaboration; trust and familiarity; activities deprivatizing practices; access to logistical information and shared expectations about the role of supervisors; and time for collaboration.

Rigelman, N.M., & Ruben, B. (2012). Creating foundations for collaboration in schools: Utilizing professional learning communities to support teaching candidate learning and visions of teaching. *Teacher and Teacher Education: An International Journal of Research and Studies*, 28(7), 979-989.

Despite widespread acknowledgment of the power of professional collaboration, the norm in most schools is teachers working in isolation. Our study examined the impact of multiple layers of professional collaboration intentionally integrated into a one-year preservice teacher education program working in two elementary schools. Analysis of 23 teacher candidates' written reflections, focus group interviews, and classroom observations indicated that supported

by collaboration with colleagues, they developed the skills and commitment to teach each student for understanding. Based on our research, we propose a shift in teacher education toward collaborative inquiry about teaching and learning within school/university partnerships.

Professional Learning Community- cyberspace: An on-line community of professionals which fosters mutual cooperation, emotional, support, and personal and professional growth as they work together.

[A Message Board of Small, Good Things. \(2014\). *Educational Leadership*, 71\(5\), 8.](#)

The article reviews The ProTeacher social network found on the website www.proteacher.net, highlighting its message boards.

[Daniel, G. R., Auhl, G., & Hastings, W. \(2013\). Collaborative feedback and reflection for professional growth: Preparing first-year pre-service teachers for participation in the community of practice. *Asia-Pacific Journal Of Teacher Education*, 41\(2\), 159-172.](#)

Teaching has been described as an emerging community of practice. Within such professional communities, the processes of reflection and collaborative dialogue, or critical transformative dialogue, are central to the maintenance and improvement of professional practice for individuals, and the field. This paper reports on the challenges experienced by a group of first-year pre-service teachers engaging in a process of reflection and critique with peers, as they participated in a program focused on the development of core practices of teaching. These pre-service teachers' responses indicated their growing understanding of the importance of engaging in ongoing critical dialogue, as part of the "unnatural" aspects of teaching. The paper concludes with a reflection on the value of feedback from the earliest stages of professional learning.

[Gutierrez, C., & Bryan, C. \(2010\). Online community becomes a pathway to teacher leadership. *J Staff Development*, 31\(1\), 42-47.](#)

A few years ago, the authors began to consider how to foster more intentional teacher leadership development among all clinical teachers who mentor teacher candidates in their Professional Development Schools. A Professional Development School (PDS) is an in-depth school-university partnership designed to bring about the simultaneous renewal of schools and teacher education programs as an educational reform approach to increasing teacher quality. In this article, the authors narrate how they were challenged to develop innovative ways that online learning communities could foster collaboration, support, and learning, especially for novice teachers, in order to break the isolationist nature of the profession. For years, they have faced challenges of time, money, capacity, and contractual issues in providing high-quality systemic professional learning for clinical teachers. Carrying the PDS approach into the 21st century, clinical teachers formed an innovative online community intended to not only increase

clinical teachers' mentoring skills, but to also provide them with a pathway to seeing themselves as teacher leaders. A framework for clinical teachers as teacher leaders is presented.

Palloff, R.M., & Pratt, K. (1999). *Building learning communities in cyberspace: Effective strategies for the online classroom*. San Francisco: Jossey-Bass Publishers.

This book offers suggestions for developing well-planned and effective computer-mediated distance learning. Part 1 lays the foundation for a distance education framework. Chapter 1 explores issues involved in teaching and learning when learning moves into the online environment. Chapter 2 looks at the essence of the framework--the importance of building community in the online environment--and differentiates a model of pedagogy that leads to success in the electronic classroom from a traditional model of pedagogy. Chapter 3 explores key issues needing attention in the electronic classroom. Chapters 4-5 address more concrete issues of time, group size, and technology as they pertain to online teaching. Part 2 is an experiential guide to creating an electronic learning community leading to effective distance learning. Chapter 6 shows how to make the conversion from the traditional classroom to cyberspace. Chapter 7 offers suggestions on the following activities: creating a syllabus, setting objectives and learning outcomes, negotiating guidelines, setting up the course site online, gaining participation and student buy-in, and accounting for presence in the online classroom. Chapter 8 offers techniques to stimulate collaborative learning. Chapter 9 explores incorporating transformative learning into the context of the online course. Chapter 10 focuses on evaluating results. Chapter 11 reviews keys to successful online learning.

Sorin, R. (2004). Webfolio: An online learning community to help link university studies and classroom practice in preservice teacher education. *Australasian Journal of Educational Technology*, 20(1), 101-113.

The Webfolio project was developed at James Cook University to extend students' professional learning beyond what is taught in lectures or gleaned through the practicum. Through Web based case studies, early childhood and primary preservice teachers explored topics of professional significance to their growth as teachers. Each case study included a range of media, such as: work samples; audiotaped conversations; links to Web sites; telephone and in person professional opinions from practising teachers, principals, social workers and welfare agents; and online discussion with other participants, including students, teachers and university lecturers. Case studies were based on authentic classroom situations; ones which student teachers may never encounter during their practicums, therefore requiring them to immerse themselves in the professional world of teaching into which they were moving. There were no single, correct solutions; rather learners were encouraged to reflect, imagine and develop multiple and often nontraditional solutions. This exploration was supported within a learning community, where participants were positioned as colearners, scaffolding each other's learning while building links to the professional world. These links may assist in bridging the gap that some neophyte teachers feel when beginning their professional teaching careers.

Zuidema, L.A. (March/April 2012). Making space for informal inquiry: Inquiry as stance in an Online Induction Network. *Journal of Teacher Education*, 63(2).

This study brings the concept of inquiry as stance to bear on current understandings of how inquiry occurs within online networks for teacher induction. The author presents a case study of an online network that allowed 36 new teachers to participate in informal, spontaneous conversations. Genre research is used to examine the on-network, off-network relationship of teachers' inquiry activity. Using integrated analysis of the online messages and of interviews that focused on teachers' contexts and actions, the author presents a holistic portrait of teachers' participation in informal inquiries. The online discussions allowed novice teachers to collaboratively consider new possibilities and to individually develop and reconsider their frameworks for teaching secondary English. Inquiry mentors and researchers should recognize and make space for inquiry as stance by attending to ties between new teachers' on- and off-list activities--to how teachers enact inquiry as stance within and beyond online spaces.

Project-Based Teacher Preparation:

Coffey, H.M., Fitchett, P.G., & Farinde, A.A. (2015). It takes courage: Fostering the development of critical, social justice-oriented teachers using museum and project-based instruction. *Action in Teacher Education*, 37(1), 9-22.

Through course readings, museum visits, focus group discussions, and reflections on clinical observation experiences, preservice teachers developed a fictitious educational setting (Courage High School) that incorporates critical, social justice practices and privileges the experiences and cultural backgrounds of all K-12 students. Participants presented a model for this school and how it would benefit specific student needs. From our classroom experiences, the authors developed recommendations for how future educators problematized ideas of courage, race, and diversity in developing Courage High School. The authors suggest that using museums as experiential pedagogical tools and offering authentic learning opportunities can encourage a critical, social justice orientation to teaching and may inspire future teachers to enact courage in their teaching practice.

Rounds: During instructional rounds, small groups of teachers make relatively brief observations of their fellow teachers. These observations are longer than a typical “walkthrough” (i.e., longer than a few minutes), but usually shorter than an entire class period. When engaged in rounds, groups of teachers conduct as many substantive observations of classrooms as possible within part of a day or the entire day. For example, a group of teachers might spend an entire morning conducting rounds and then discuss their experiences in the afternoon. Another option is to discuss experiences immediately after each observation. Definition from: http://www.iobservation.com/files/Marzano-Protocol-Using_Rounds1009.pdf/

City, E.A. (2011). Learning from instructional rounds. *Educational Leadership*, 69(2), 36-41.

The article presents a profile of the collaborative school-wide teacher improvement paradigm known as "instructional rounds." Introductory information is given describing how the authors

adapted and developed the process from common medical administrative practices. A definition and framework for instructional rounds is then provided. Several major facets to the paradigm are discussed in depth, such as classroom observation, the formation of an improvement strategy, and fostering and supporting a professional network for teachers to draw from.

Del Prete, T. (2013). *Teacher rounds: A guide to collaborative learning in and from practice*. Thousand Oaks, California: Corwin.

Teachers are ready to be in the driver's seat as leaders of their own learning—and their best professional development resources may be their own classrooms and colleagues. With Teacher Rounds methodology, teachers learn with and from each other through classroom observation and inquiry and develop a trusted community of practice.

Marzano, R.J. (2011). Making the most of instructional rounds. *Educational Leadership*, 68(5), 80-81.

Instructional rounds are among the best tools that a school or district can use to improve teachers' skills and foster a culture of collaboration. The primary purpose of instructional rounds is for the observing teachers to compare their own teaching practices with those of the teachers they observe. Every teacher should participate in instructional rounds at least once a semester. The writer provides a discussion on how to get started, conducting rounds, the importance of debriefing rounds, what teachers can learn from instructional rounds, and how such rounds stimulate excitement and energy among faculty members.

Moran, W. (2014). Enhancing understanding of teaching and the profession through school innovation rounds. *Australian Journal of Teacher Education*, 39(3).

Currently, Australian teacher education programs include professional experiences as a means of enhancing preservice teacher understanding about teaching and the profession. The challenge the programs face is the lack of places available in schools and, at times, the unpredictable quality of the placements as some teachers are time-poor, are not good models of effective teaching practice, and/or lack the skills of articulating their practice. This paper briefly explores features of past models of professional experience before describing a new model that, as an inclusion in a range of field-based placements, addresses many of the challenges in teacher education today. Results from two years of surveys (N = 262) inform a practitioner research process designed to investigate the effectiveness of this new model. Findings suggest that while the program cannot negate all the difficulties associated with ensuring quality placements, it does provide some solutions that assist in improving the professional experiences of preservice teachers.

Teitel, L. (2009). Improving teaching and learning through instructional rounds. *Harvard Education Letter*, 25(3), 1-3.

Growing numbers of educators are using instructional rounds to examine what is happening in their schools' classrooms and to systematically try to provide high-quality teaching and learning for all students. Instructional rounds is an idea adapted from the medical rounds model that doctors use. Participants work in networks with one another and in consultation with a team of faculty and students at the Harvard Graduate School of Education, spending much of their time in classrooms, looking at instruction in fine detail, and learning to talk in new ways with each other about what they see. The four step process involves identifying a problem of practice on which the host team asks members of the network to focus during classroom observations, the observation practice, the observation debrief, and the identification of the next level of work.

Teaching Portfolios: Teacher and Student Work Samples

Part of a portfolio in which prospective teachers learn to analyze their work; Method for candidates to demonstrate their proficiency in influencing pupil learning. It provides a demonstration by those seeking teacher licensure of their ability to draw connections between their teaching and the learning of their P-12 students.

Fox, R.K., Muccio, L.S., White, C.S., & Tian, J. (2015). Investigating advanced professional learning of early career and experienced teachers through program portfolios. *European Journal of Teacher Education*, 38(2), 154-179.

Since closing the gap between different levels of professional development for teachers has been identified as a particular need in our profession, capturing the results of professional coursework can help teacher educators better understand and meet the unique needs of teachers with different levels of experience. This study examined the effects of professional development on early career (EC) and experienced (EXP) teachers during an advanced master's degree programme in the USA. Qualitative analysis of 47 teacher portfolio reflections and 11 post-programme interviews investigated how EC and EXP teachers engaged in programme learning experiences to determine the ways that coursework influenced their professional growth. Differences between EC and EXP teachers were noteworthy, indicating that these two groups responded to professional development experiences differently. Ongoing research to determine effective differentiated approaches toward professional development for both novice and EXP teachers remains a key area for teacher education research, most particularly with a goal of measuring the results of professional development on improving PK-12 student performance.

Gelfer, J.I., Xu, Y., & Perkins, P.G. (2004). Developing portfolios to evaluate teacher performance in early childhood education. *Early Childhood Education Journal*, 32(3), 127-132.

One goal of the teacher's professional portfolio is to describe the full range of abilities and document effective teaching over an extended period of time. In this article we discuss the

procedure that teachers can use in developing their own portfolio assessment to help generate data for making decisions about teaching performance. The development of a teacher portfolio requires planning, time, organization and cooperation from students, colleagues, parents and supervisors. The format of the portfolio may vary from individual to individual and be based upon personal preference. Organizations and contents of the teacher portfolio are suggested. Questions and associated lists of teaching artifacts are discussed based on the authors' experiences as early childhood classroom teachers and university professors. The answers to these questions will guide the selection of activity-generated products to best represent the essence of the teacher performance.

Girod, G.R. (2002). *Connecting teaching and learning: A handbook for teacher educators on teacher work sample methodology*. Washington, D.C.: AACTE Publications.

This handbook shares methodologies for guiding teacher preparation and licensing. It provides a rationale for the inclusion of teacher work sample methodology in preparation and licensing programs, describes how student learning is the central concept within teacher work samples, explains how to teach students and teachers about work samples, and supports teacher educators who need to work with their colleagues in reviewing, adapting/adopting, and implementing the methodology.

Hartnett-Edwards, K. (2013). THE TEACHER WORK SAMPLE AND 21ST CENTURY LEARNING. *Curriculum & Teaching Dialogue*, 15(1/2), 147-160.

This paper explores the process of revision and reconsideration that a small university-based program underwent as it sought to adapt its program components to the new landscape of preservice teacher preparation and 21st century learning. Documenting the changes made as a result of a preliminary use of Teacher Work Sample, a professional portfolio approach was tried. The result, known as the Demonstration of Learning, served to provide both candidate and program accountability in addition to supporting the eventual employment efforts of the candidates who participated.

Keese, N., & Brown, T. (2003). Student teacher input and teacher work sample as part of a teacher education unit accountability system. [Paper presented at the Annual Meeting of the Association of Teacher Educators in Santa Fe, NM, August 9-13, 2003].

This paper presents findings of surveys completed by student teachers on their ability to prepare a teacher work sample, discussing potential program improvements arising from survey responses related to planning, assessment, and student learning, which are components of a teacher work sample, also sharing student teachers' perceptions of their preparation in using assessment to document impact on student learning. Student teachers designed units of instruction (teacher work samples), then identified and sequenced learning goals for a classroom of students which reflected state standards for learning; aligned instruction and assessment with learning goals to be accomplished; monitored the progress of each student toward those goals;

adapted instruction to accommodate each student's needs; and meaningfully summarized and reported each child's progress. These work samples provided an organizing framework for evaluation, assessment, and reflection of a unit of instruction. Student teachers were specifically asked about decisions regarding teaching content and pedagogy, improvement of teaching methods, and uses of assessment data. The pre- and post-surveys and survey data are attached.

Kohler, F., Henning, J.E., & Usma-Wilches, J. (2008). Preparing preservice teachers to make instructional decisions: An examination of data from the teacher work sample. *Teaching and Teacher Education: An International Journal of Research and Studies*, 24(8), 2108-2117.

The purpose of this American study was to examine student teachers' ability to make instructional decisions as they engaged in teaching. We examined the narrative accounts provided by 150 student teachers within their teacher work samples (TWSs). Results indicated that most student teachers were able to implement some aspects of instructional decision making, such as noting a specific difficulty with student learning and making an on-the-spot adjustment in their instruction. However, other elements of instructional decision making were less likely to be implemented. For example, student teachers relied on a limited range of formative assessment strategies and instructional modifications, and very few provided a sound rationale for their choice of modification. These results suggest that novice teachers may benefit from more opportunities to reflect and critique upon authentic learning experiences as they complete their teacher preparation programs. Finally, the TWS appears to represent a viable method for examining the instructional decisions of student teachers.

Rigoni, K.K., Pugach, M.C., Longwell-Grice, H., & Ford, A. (2013). A programmatic view of portfolios for urban teacher preparation: A second look. *Education and Urban Society*, 45(1), 88-119.

This replication study represents an analysis of 47 exit portfolios of students enrolled in an urban teacher education program. Portfolios were analyzed to determine the degree to which students integrated concepts related to teaching in urban schools: asset/deficit perspectives, connections with families, social justice, high expectations for student learning, and contextualized teaching and learning. The portfolios fall into three groups along a continuum from "awareness" to "trying things out" to "making it their own." With 30%, 51%, and 19% falling into each group respectively, the data are interpreted in relationship to faculty development and the challenges of scaffolding preservice teachers.

Stobaugh, R.R., Tassel, J.L., & Norman, A.D. (2010). Improving preservice teacher preparation through the teacher work sample: Exploring assessment and analysis of student learning. *Action in Teacher Education*, 32(1), 39-53.

This study focuses on the Renaissance Teacher Work Sample's critical sections Assessment Plan and Analysis of Student Learning. Preliminary review of scoring data based on the sample revealed that preservice teachers at a large comprehensive institution teacher program appeared to be most challenged with designing assessments and analyzing student learning, compared to other sections. Further analysis of multiple sources of

data related to these skills—including deeper study of the student teacher performance on the sample, student-teaching evaluation proficiency rates, self-reported scores on teacher standards, and Praxis scores—indicated that all intersected with the same theme: relatively low areas for this institution's preservice teachers in assessment and analysis. Based on these results, institutional efforts to improve student performance in this area are addressed.

e-Portfolios: an electronic portfolio consists of digital content assembled and managed by a prospective teacher on the web.

[Boulton, H. \(2014\). ePortfolios beyond pre-service teacher education: a new dawn?. *European Journal Of Teacher Education*, 37\(3\), 374-389.](#)

The aim of this paper is to demonstrate the efficacy of using ePortfolios to enhance career skills for newly qualified teachers (NQTs). The context is the final phase of a longitudinal action research project investigating whether an ePortfolio, created as a pre-service teacher to evidence a digital story of developing professional identity, could transition into employability, i.e. the first year as an NQT. Thus, this paper focuses on a new area of ePortfolio-related research in teacher education; the transition from university into employment. The research findings indicate a changing purpose of the ePortfolio from training to the workplace, an increasing strength of ownership as part of the transition, and empowerment in becoming a teacher. Secondary findings demonstrate an increasing acceptance amongst head teachers regarding the usefulness of the ePortfolio in pre-service teacher education and in the continuing professional development of qualified teachers. Key outcomes are discussed and arguments are presented for an ePortfolio to support professional development from university to employment.

[Henning, J.E., Robinson, V.L., Herrin, M.C., & McDonald, T. \(2006-2007\). Integrating technology during student teaching: An examination of teacher work samples. *Journal of Computing in Teacher Education*, 23\(2\), 71-76.](#)

This study examined the teacher work samples of 197 student teachers to determine their level of technology integration during student teaching. Findings indicated that most student teachers planned to use some kind of technology, although only 40% planned to include computers and less than 20% planned for the use of computers by students. The barriers to technology integration were most often related to instruction (e.g., the technology did not serve the learning goals and the technology was not developmentally appropriate) rather than a lack of available resources and time. These findings may be explained in part by the unique character of the teacher work sample (TWS) data, which prompts student teachers to report on their technology use during a single unit of instruction.

Lambe, J., McNair, V., & Smith, R. (2013). Special educational needs, e-learning and the reflective e-portfolio: implications for developing and assessing competence in pre-service education. *Journal Of Education For Teaching*, 39(2), 181-196.

This article reports on the use of e-portfolios to assess aspects of a one year, post-graduate pre-service teacher education programme in Northern Ireland within the specific context of special needs education. The rationale for using an e-portfolio for programme assessment and the potential it offers in demonstrating a range of teaching competencies is examined, with participants in the study challenged to develop their individual e-portfolios by selecting and presenting evidence for assessment drawn from a wide range of sources. In so doing they were asked to reflect upon their personal, academic and pedagogical learning and development across the pre-service year. The article also reports on the individual student experience of building an e-portfolio and attitudes towards its use for assessment purposes within pre-service education and beyond. Finally, it considers the potential for using e-portfolios across all phases of teacher education.

Oakley, G., Pegrum, M., & Johnston, S. (2014). Introducing E-Portfolios to Pre-Service Teachers as Tools for Reflection and Growth: Lessons Learnt. *Asia-Pacific Journal Of Teacher Education*, 42(1), 36-50.

E-portfolios are being introduced into initial teacher education programmes internationally to help pre-service teachers build records of their learning journeys and develop into reflective practitioners; to allow them to assemble collections of evidence of their achievements against graduate standards, which can function as digital CVs; and to facilitate the seeding of personal learning networks that will support lifelong learning after graduation. Despite certain tensions between these aims, the potential benefits of e-portfolios make them an increasingly popular choice in teacher education. In this article, we discuss the introduction of Wi-Fi-based e-portfolios into a Master of Teaching programme at an Australian university. These served primarily as “developmental e-portfolios” or personal learning environments (PLEs), and were designed to place particular emphasis on reflective practice. We describe how the e-portfolios were perceived and used by pre-service teachers in the first year of their implementation, and indicate the challenges and limitations encountered. Lessons learnt from the implementation are outlined and recommendations are proposed.

Teacher Academies: provides on-going seminars and courses related to teaching and learning (can be in partnership with higher educational institutions, private organizations, or other agencies)

Botman, S. (2006). [Report]. Teacher academy: Preparing the next generation of public school teachers. Luncheon series. *Center for Educational Innovation—Public Education Association*.

On September 14, 2006, Dr. Selma Botman, CUNY's (City University of New York's) Executive Vice Chancellor for Academic Affairs, spoke at a Center for Educational Innovation-Public Education

Association (CEI-PEA) Luncheon about the Teacher Academy and its strategy for success. Dr. Botman's remarks demonstrated the optimism and accomplishments that CUNY, under the leadership of Chancellor Matthew Goldstein, has brought to the New York City educational community over the past decade as the University has gone through a renaissance that places it as one of the most successful public universities in the nation. This paper presents an edited version of the transcript.

Flores, B.B., Hernandez, A., Garcia, C.T., & Claeys, L. (2011). Teacher academy induction learning community: Guiding teachers through their zone of proximal development. *Mentoring & Tutoring: Partnership in Learning*, 19(3), 365-389.

This is a preliminary analysis of The Academy for Teacher Excellence (ATE) induction support provided through the Teacher Academy Induction Learning Community (TAILC). In response to current US teacher attrition rates, ATE-TAILC's primary objective is to retain teachers in the classroom and provide support to ensure they are fully prepared to meet the needs of culturally and linguistically diverse students. In this manuscript, we will share the TAILC component as a support structure for teacher candidates/interns during the apprenticeship period, which commences while obtaining certification requirements and continues during/through their first years of teaching. Data were collected via surveys, individual and group interviews, and induction mentors' classroom observations. Qualitative methods were used to analyze the data. We describe and discuss effective services and professional development activities provided to 69 novice teachers. We concluded that effective teacher induction support assists novice teachers through their zone of proximal development in becoming members of a community of practice.

Year Long Teacher Residencies: designed to embody best practices in recruitment, screening, preparation, placement, induction, and teacher leadership

Berry, B., Montgomery, D., Curtis, R., Hernandez, M., Wurtzel, J., & Snyder, J. (2008). [Report]. Creating and sustaining urban teacher residencies: A new way to recruit, prepare, and retain effective teachers in high-needs districts. *The Aspen Institute and Center for Teaching Quality*.

Urban Teacher Residencies (UTRs) are an emerging innovation designed to embody best practices in recruitment, screening, preparation, placement, induction, and teacher leadership for urban school districts. UTRs can be a key element of urban districts' portfolio of pathways into teaching and a lynchpin of a larger strategy to strengthen the districts' human capital system. The debate continues to rage about the best way to recruit, prepare and induct teachers and the virtues of traditional university-based versus alternative preparation programs located in a variety of settings. Quality varies widely within each program type--and neither type of program is able to meet the urban districts' needs for high quality, diverse teachers in high needs subjects who are committed to a long-term career in high needs schools. As a result, there is growing attention to UTRs as an additional pathway to improving teacher quality. A number of major school districts are considering launching programs, and with the recent passage of the

federal Higher Education Opportunity Act, millions of dollars have been authorized to develop and support UTRs. This report examines two UTR programs, the Academy for Urban School Leadership (AUSL) in Chicago and the Boston Teacher Residency (BTR). The report aims to inform policymakers and practitioners about the design and financing of UTRs, the evidence of their impact, and the conditions relevant to their success and sustainability. In UTRs, aspiring teachers--known as Residents--are selected according to rigorous criteria aligned with district needs. They integrate their master's level course work with an intensive, full-year classroom residency alongside an experienced Mentor. In their second year, they become a teacher with their own classroom while continuing to receive intensive mentoring.

Berry, B., Montgomery, D., & Snyder, J. (2008). [Report]. Urban teacher residency models and institutes of higher education: Implications for teacher preparation. *Center for Teaching Quality.*

The Center for Teaching Quality (CTQ), in partnership with the Aspen Institute and the National Council for the Accreditation of Teacher Education (NCATE), has been investigating the urban teacher residency (UTR) -- an innovative response to the longstanding challenges of how to recruit, prepare, and retain bright and capable teachers for high-needs urban schools. Chicago's Academy for Urban School Leadership (AUSL) and the Boston Teacher Residency (BTR) Program are two of the nation's most promising UTRs. In some respects UTRs represent a "third way" -- addressing the weaknesses as well as incorporating the best of both traditional and alternative approaches to teacher education and certification. In brief, UTRs recruit teaching talent aggressively, with the supply and demand needs of local districts in mind. They also insist on extensive preparation, whereby recruits are paid a stipend while learning to teach in a full-year residency, under the watchful eye of expert K-12 teachers. Because the Residents are not fully responsible for teaching children, they have more quality time to take relevant pedagogical coursework "wrapped around" their intense student teaching experience. While both AUSL and BTR are relatively new programs, early studies on their graduates' effectiveness and their high retention rates of 90 to 95 percent suggest these models hold great promise for preparing and supporting teachers in high-needs urban schools. This analysis has pointed to the importance of taking very different approaches to recruitment, selection, preparation, and induction of new teachers; recognizing the need for advanced professional development that prepares experienced teachers for new roles as teacher leaders; creating different structures in schools for enhanced support and teacher collaboration, with profound implications for teachers' roles, compensation, and daily schedules. By design, UTRs have the potential -- and perhaps the necessity -- for long-term success to point the way not just to another pathway for teacher certification, but a comprehensive teaching development system.

Garza, R., & Harter, R. (2011). Characteristics of effective mentors: Perspectives from pre-service mathematics and science teachers in an urban residency program. *AERA, Division K-Teaching and Teacher Education*. [Paper presented at the annual meeting of the American Educational Research Association, April 13-17, 2011].

*The purpose of our study was to examine mathematics and science pre-service teachers' perceptions of their mentoring experiences during their 1st year in the **Teaching Residency Program for Critical Shortage Areas**, an initiative designed to recruit, prepare, and retain teachers for high-need urban schools. Results from this mixed-methods study illustrated pedagogical aspects and mentor characteristics that enhanced and impeded pre-service teachers' growth and development. Therefore, professional development, especially working with adults, must also include frequent monitoring of the mentoring relationships to identify problematic situations. Our findings also suggested that an extended field experience helps deter deficit thinking about a diverse student population. The dynamics of teaching alongside a mentor through a residency program, coupled with the challenges of an urban setting, provide an opportunity for researchers to continue to examine pre-service teachers' development and to identify effective practices to build mentor capacity.*

Garza, R., & Werner, P. (2014). Preparing mathematics and science teachers through a residency program: Perceptions and reflections. *Teaching Education*, 25(2), 202-216.

The critical challenge of recruiting, preparing, and retaining high-quality mathematics and science teachers for high-need urban schools is complex. Therefore, identifying factors that support and impede a teaching residency program's implementation may have the potential to build an effective initiative that will benefit all stakeholders. The purpose of our study was to examine preservice teachers' perceptions about their experiences in the Teaching Residency Program for Critical Shortage Areas program, a federally funded program designed to address teacher shortages in mathematics and science in high-need schools. Three themes emerged from the data analysis: (a) the residency framework, (b) a relevant curriculum, and (c) immersion in an authentic school context. Our findings have the potential to inform policy-makers, school administrators, university directors of school partnerships, and other individuals who have direct influence on teacher recruitment and retention.

Tindle, K., Freund, M., Belknap, B., Green, C., & Shotel, J. (2011). The urban teacher residency program: A recursive process to develop professional dispositions, knowledge, and skills of candidates to teach diverse students. *Educational Considerations*, 38(2), 28-35.

To be prepared to teach in an urban setting, preservice teachers must exit their teacher preparation program with a professional disposition toward equity and social justice as well as the knowledge and skills required to meet the needs of all students in their classroom. The National Council for the Accreditation of Teacher Education (NCATE) requires under Standard 4-Diversity that accredited institutions of higher education train, equip, and assess preservice candidates with regard to their ability to address diversity in their classrooms; and ensure that

preservice candidates encounter diverse student populations as they prepare to teach. In addition, preparing teachers for the challenges of urban schools requires candidates dedicated to self-examination and reflection on practice to assure comfort in the setting and the flexibility necessary for adjustment in the implementation of expected teaching and learning outcomes. Many preservice candidates preparing to teach in urban schools will meet students from ethnic, racial, linguistic, cultural, and socio-economic backgrounds that are different from their own. It is central that teacher preparation programs provide opportunities for urban teacher candidates to explore, develop, and maintain dispositions and beliefs that allow them to instruct students in a manner that respects each child's unique characteristics while promoting the highest standard of learning possible. This article describes how the George Washington University (GWU) Graduate School of Education and Human Development Urban Teacher Residency Program meets NCATE Standards 4a and 4d through a program design that includes a recursive exploration of teacher beliefs, knowledge, and effective practice for diverse student populations. NCATE Standard 4a relates to the design, implementation, and evaluation of curriculum and experiences in teacher preparation programs. It requires that teacher candidates participate in coursework and clinical settings that promote diversity and inclusion of all students. NCATE Standard 4d requires teacher candidates to participate in a range of clinical experiences that allows them to work with students from diverse backgrounds. By participating in clinical settings with students from backgrounds different from than their own, candidates are able to confront their own beliefs about diversity and apply learning from coursework in diversity. They work to improve student learning in a variety of contexts with a variety of students and thereby improve their effectiveness as teachers. This process is facilitated and assessed by frequent feedback from program supervisors and peers.

Teacher Research and Study Groups: Calls for voluntary commitment, builds community and caring, challenges our thinking as educators, and integrates theory and practice

[Echeverri Sucerquia, P.A., & Pérez Restrepo, S. \(2014\). Making sense of critical pedagogy in L2 education through a collaborative study group. *Profile: Issues in Teachers' Professional Development*, 16\(2\), 171-184.](#)

In this article we discuss our experiences in the process of understanding critical pedagogy within an English teachers' study group which was created for the purpose of learning how to teach language from a critical perspective. We particularly focus on the challenges of meaning making around critical pedagogy, as we realized that we were not all able to similarly enter this discourse. To illustrate our processes of understanding theory individually and collectively, some of the group members' narratives are used as examples of our different perspectives. We argue that making sense of critical pedagogy, as part of a process of professional development, implies spaces and situations of personal confrontation with theory and support in collaborative learning through dialogue.

Hung, H.T., & Yeh, H.C. (2013). Forming a change environment to encourage professional development through a teacher study group. *Teaching and Teacher Education*, 36, 153-165.

This study is grounded in the context of English-as-a-Foreign-Language (EFL) teacher education in Taiwan and aims to promote the potential of teacher study groups. The Interconnected Model of Teacher Professional Growth provides a framework to design this teacher study group and to analyze the learning process as experienced by the participating teachers within the collaborative inquiry. The study illustrates the group's learning process by characterizing the major patterns of the teachers' changes in beliefs and practices. The results support the claim that the design of the teacher study groups plays a major role in shaping various sequences of teacher change.

Viáfara, J.J. (2014). EFL student teachers' learning in a peer-tutoring research study group. *Colombian Applied Linguistics Journal*, 16(2), 201-212.

In order to become peer-tutors in a BA program in Modern Languages, a group of English as a Foreign Language (EFL) student teachers attended a study and research group in a university. Throughout their participation, prospective teachers collaborated and reflected by means of task completion and dialogue to learn the theory and practice of tutoring and research. Additionally, participants provided survey, journal, and interview data to contribute to the exploration of how their group membership shaped them academically and personally. Results suggested that student teachers increased their knowledge of English due to their use of real-life group dynamics, among others. Furthermore, they updated and expanded their competencies to monitor pedagogical situations, design strategies, and solve problems.

Teaching Cases: are narratives about the universal challenges inherent in the “real world” of classrooms, teaching, and schools (See: http://cases.coedu.usf.edu/case_dev.htm)

Celik, S., Demirarslan Cevik, Y., & Haslaman, T. (2012). Reflections of prospective teachers regarding case-based learning. *Online Submission, Turkish Online Journal of Qualitative Inquiry*, 3(4), 64-78.

The growing interest toward case-based learning for teacher education can be attributed to the inherent potential of cases in terms of providing prospective teachers with opportunities to engage in analyzing and solving realistic teaching cases and to apply what they learned in classes to solve these practical teaching issues. The objective of this research is to determine the perceptions of prospective teachers toward case-based learning in a teaching methods course. Participants of the current study were 38 prospective teachers (17 males and 21 females) attending the third year of a computer education and instructional technology department in Turkey. In the present study, qualitative research methods were utilized to explore prospective teachers' perceptions regarding case based learning. Semi-structured interviews were conducted

with participating teacher candidates and to analyze and interpret the data content analysis and concordance method were exploited. The results suggest that in general the cases provided a valued opportunity to engage developing teachers in solving real life problems that tend to occur in actual teaching. The other evidences emerged from the study suggest that cases can help prospective teachers be prepared for their early teaching experiences in real classrooms by improving their understandings of how to respond to actual problems they will encounter in their fields and how to apply what they learned in classes to solve practical teaching issues. Suggestions were made for further research.

Greenwood, G.E., & Parkay, F.W. (1989). *Case studies for teacher decision making*. New York: Random House.

Heitzmann, R. (2007). Case study instruction in teacher education: Opportunity to develop students' critical thinking, school smarts and decision making. *Education*, 128(4), 523-542.

The author argues that case study instruction should be a central component to teacher preparation programs. It is a pedagogy that offers many opportunities and strategies for perspective teachers to gain insight into events that occur within the school and classroom. This paper describes the significance and research findings that support case study methodology and its advantages for future educators. The author offers strategies to incorporate this teaching method into a university/college classroom, as well as provides a detailed example of an effective program developed at Villanova University. The concept of "school smarts" receives treatment; an extensive annotated bibliography of case books is provided.

Kantar, L.D. (2013). Demystifying instructional innovation: The case of teaching with case studies. *Journal of the Scholarship of Teaching and Learning*, 13(2), 101-115.

Issues emerging from instructional innovation are inevitable, yet basing any curriculum shift on a theoretical framework is paramount. This paper grounds the case-based pedagogy in three learning theories: behaviorism, cognitivism, and constructivism. The three theories are described and situated in relation to the case study method. An in-depth exploration of the assumptions of each theory helped to identify and analyze several issues that emerged upon the implementation of the case-based pedagogy in a nursing curriculum. In line with the three pedagogical standpoints, and after an extensive literature review, measures are proposed to improve the quality of student learning in a case-based curriculum, and principles are derived to support educators in their teaching with case studies. The application of the three learning theories may be especially useful to educators and instructional leaders when shifting paradigms. By describing the key challenges that educators may face with instructional innovation and the usefulness of the cognitivist, behaviorist, and constructivist perspectives in providing explanations and recommendations, provides a beginning research base for improving pedagogies. Failure to employ theories of learning in similar educational shifts may hinder the progress of any intended curriculum transformation.

Sankar, C.S., & Raju, P.K. (2011). Use of presage-pedagogy-process-product model to assess the effectiveness of case study methodology in achieving learning outcomes. *Journal of STEM Education*, 12(7&8), 45-56.

In this paper, we integrate organizational, engineering education, and educational learning literature to develop a model of student learning so as to research how learning style, behavioral tendencies, gender, and race have the potential to act as facilitators or barriers to the learning process. We argue that the gains in higher-order cognitive skills, improvement in self-efficacy, and improvement in team-working skills are positively related to the absence of barriers to the learning process. The experimental design tests the model at two universities: Auburn University, a large land-grant institution in Auburn, Alabama, and Hampton University, an HBCU in Hampton, Virginia. Both groups of students were provided the multimedia case studies during Spring 2010. The results show that the students prefer a visual mode of learning, that they were generally self-confident, and that they perceived an improvement in higher-order cognitive skills, team-working skills and self-efficacy after working on the case studies. At both universities, students overwhelmingly found the case studies and labs that involved building projects to be most interesting. Students found the multimedia case studies to be beneficial for improving teamwork skills, networking, problem solving, presentation skills, and communication skills. They mentioned that using the case studies helped them learn to research and make effective PowerPoints. Students also mentioned that the case studies helped their critical thinking and decision making skills. An unexpected outcome of this project was that the clinical supervision became an important outcome of the evaluation project. It provided a forum for the teaching, evaluation, and senior faculty teams to mesh together so as to improve the education of freshman engineering students.

Teaching Cases: Video

Cherrington, S., & Loveridge, J. (2014). Using video to promote early childhood teachers' thinking and Reflection. *Teaching and Teacher Education*, 41, 42-51.

This article examines findings from a qualitative study employing group stimulated-recall interviews using video-recordings of early childhood teachers to elicit their thinking and reflections about their teaching interactions. It focuses on the value of video to enable teachers to reflect on their practices and the extent to which collectively viewing recorded episodes allows negotiated understandings of their own and other teachers' practices. Whilst these findings suggest that video and collective dialogue are useful professional learning tools for teachers to examine and improve their teaching, structural and relational challenges exist that may impact on how effectively such tools are used.

Danielowich, R., & McCarthy, M. (2013). Teacher Educators as Learners: How Supervisors Shape Their Pedagogies by Creating and Using Classroom Videos with Their Student Teachers. *Action In Teacher Education*, 35(3), 147-164.

Although classroom video is well recognized as a valuable reflective resource for student teachers, we know very little about how university supervisors' pedagogical practices are shaped by creating and using videos with their student teachers. This study explored how 12 supervisors developed greater stances of inquiry toward their practices as they experimented with video and shared their experiences with peers. Patterns in project meeting and interview transcripts revealed how these experiences not only enhanced their existing personal approaches toward supervision and helped them "anchor messages" they wanted to communicate to their student teachers about teaching methods, but also challenged their roles as observers and prompted them to build messages about teaching dispositions directly from video. The findings show how a community of practice encourages supervisors to take considerable responsibility for their own growth as teacher educators and provides a coherent framework others can use to pursue similar professional development initiatives.

Fennell, H. (2013). Reel Stories of Teaching: Film and Teacher Education. *Action In Teacher Education*, 35(5/6), 445-461.

In this article, findings are presented from a recently completed study conducted with teacher candidates from an educational foundations course in which films were used as part of the text to encourage critical discussion. The work explores teacher candidates' experiences with using films as means to develop critical and creative thinking about teaching practices, democracy, power relationships, and ethics in classroom teaching. Implications and means through which teacher educators can use films in their daily work are also discussed.

Han, I., Eom, M., & Sug Shin, W. (2013). Multimedia case-based learning to enhance pre-service teachers' knowledge integration for teaching with technologies. *Teaching and Teacher Education*, 34, 122-129.

This study investigates the effects of case-based learning on pre-service teachers' knowledge integration related to teaching with technologies. 78 pre-service teachers were provided with interventions that included either video cases or no cases. ANCOVAs were performed to compare two groups' TPACK scores representing technological, pedagogical and content knowledge, and their integration. The results showed that video cases improved pre-service teachers' perceived learning of technological and pedagogical knowledge, and knowledge integration of these knowledge areas. However, content-relevant knowledge for technology integration was not developed through case-based learning. The results were discussed in the context of current teacher preparation programs.

Pitts Bannister, V., & Mariano, G. (2013). Snapshots of Student Thinking: An Exploration of Video Cases for Extending Prospective Teachers' Knowledge. *Action In Teacher Education*, 35(5/6), 430-444.

The purpose of this article is to explore the relationships between prospective teachers' content knowledge, student understanding, and pedagogy using video cases. The emphasis was on the extent to which the participants utilized constructs of Technology Pedagogy And Content Knowledge. Ten prospective teachers viewed video cases of students solving mathematical problems to look for evidence of student understanding and determine how they could use that information to guide instruction. Findings suggest that prospective teachers may lack or ignore tools to critically think about the interdependent relationship in ways that might promote diverse methods involving technology. Also, prospective teachers may be limited to constructs of their content knowledge when evaluating student conceptions and constructing aligned pedagogical strategies. Implications for teacher education are discussed.

Wiens, P.D., Hessberg, K., LoCasale-Crouch, J., & DeCoster, J. (2013). Using a standardized video-based assessment in a university teacher education program to examine preservice teachers knowledge related to effective teaching, *Teaching and Teacher Education*, 33, 24-33.

The Video Assessment of Interactions and Learning (VAIL), a video-based assessment of teacher understanding of effective teaching strategies and behaviors, was administered to preservice teachers. Descriptive and regression analyzes were conducted to examine trends among participants and identify predictors at the individual level and program level. Results from this study demonstrate that a standardized assessment used previously with in-service teachers can be implemented in a teacher education program. Analysis shows variability in preservice abilities to detect effective teaching strategies and behaviors that is partially explained by teacher education program factors.

Microteaching: preservice teachers and faculty play the role of realistic students while a peer takes on the role of "teacher." A short lesson is presented and events unfold as they might in the classroom. A discussion after the lesson takes place in order to guide reflection and suggest best practices for future experiences. Microteaching is often videotaped for review by the student "teacher."

Microteaching: Selected papers. (1971). Washington D.C.: Association of Teacher Educators in collaboration with ERIC Clearinghouse on Teacher Education.

This is the second of a series of three bulletins dealing with "Supervisory Strategies in Clinical Experiences." The first of the two papers, "Microteaching: History and Present Status," by James M. Cooper and Dwight W. Allen, begins with a definition of microteaching as a teaching situation which is scaled down in terms of time and numbers of students, but which is not synonymous with simulated teaching, as the teacher, students, and lesson are all "real." The history of microteaching from its development in 1963 is outlined, followed by an explanation of the rationale, the uses of microteaching in preservice and in-service training in the Peace Corps,

counseling, supervisor training, and the training of college teachers. Research evidence on the effectiveness of microteaching is examined and the teaching skills involved are listed. There is a bibliography of 58 items. The second paper, "Microteaching in Teacher Education Programs," by Robert F. Schuck, considers three programs: 1) the original Stanford Teacher Education Project, which developed nine specific technical skills in secondary education; 2) the Brigham Young University Program, which forms part of the preservice curriculum; and 3) the San Jose State College Study of that institution's program for elementary intern teachers. A brief concluding section suggests that microteaching holds promise as a research strategy for investigators interested in patterns of instruction.

Arsal, Z. (2014). Microteaching and pre-service teachers' sense of self-efficacy in teaching. *European Journal Of Teacher Education*, 37(4), 453-464.

This study examined the effect of microteaching on pre-service teachers' sense of self-efficacy in teaching using a pre-test/post-test quasi-experimental design. The sample of the study consisted of 70 pre-service teachers on a special education teacher preparation programme. The pre-service teachers in the experimental group were exposed to microteaching training for one semester. The Teachers' Sense of Efficacy Scale was administered to all pre-service teachers as a pre-test at the beginning and as a post-test at the end of the semester. The results revealed that the pre-service teachers in the experimental group showed statistically significant greater progress in terms of sense of self-efficacy in teaching than those in the control group. In addition, the results highlighted that microteaching had a positive impact on developing pre-service teachers' sense of self-efficacy in teaching.

Fernández, M.L., & Robinson, M. (2006). Prospective teachers' perspectives on microteaching lesson study. *Education*, 127(2), 203-215.

Microteaching Lesson Study [MLS] is a cooperative learning experience that we felt could challenge our prospective teachers thinking about teaching and support their connection of theory and practice during an initial course on learning to teach mathematics. We studied seventy-four prospective teachers' perspectives on MLS over four sections of the course. MLS brings together cooperative groups of prospective teachers in cycles of planning, teaching, reflecting, and revising lessons. Findings from analysis of quantitative and qualitative data gathered through MLS Feedback Surveys and written reflective MLS reports revealed that our prospective teachers perceived MLS to be a worthwhile learning experience. In particular, they felt that most important about their learning through MLS was connecting theory to practice, collaboration, and reflection. Participants appreciated applying in teaching what they were learning in the course. They valued the alternate points of view and feedback resulting from collaboration with their peers and recognized the benefits of reflection in learning to teach.

Kilic, A. (2010). Learner-centered micro teaching in teacher education. *International Journal of Instruction*, 3(1), 77-100.

The purpose of this study is to investigate the effect of Learner-Centered Micro Teaching (LCMT) on the development of teacher candidates' teaching competencies. To achieve this goal, teacher candidates' teaching behaviors on subject area, planning, teaching process, classroom management, communication, and evaluation have been pre- and post tested, and the effectiveness of LCMT has been determined based on differences in the results of pre- and posttests. In this study, pretest-posttest design was used without a control group. Teacher candidates' teaching behaviors before they entered the experiment were determined by pretests and at the end of the treatment the teacher candidates were given posttests. The experimentation was constructed based on LCMT model. Results based on the scores in the pre- and posttests showed that LCMT model had a progress in teacher candidates' teaching behaviors on subject area, planning, teaching process, classroom management, communication, and evaluation.

Simulations: role-playing or rehearsal where various teaching practices are explored in an artificial situation.

Chazan, D., & Herbst, P. (2012). Animations of Classroom Interaction: Expanding the Boundaries of Video Records of Practice. *Teachers College Record*, 114(3).

For decades, teacher educators and professional developers have been using video recordings of actual classroom practice to help teachers reflect on their teaching (e.g., van Es & Sherin, 2002, 2008) and to help preservice teachers come into contact with practice (Lampert & Ball, 1998). However, the use of video records of actual practice involves important facilitation challenges (Lefevre, 2004).

Dieker, L.A., Straub, C.L., Hughes, C.E., Hynes, M.C., & Hardin, S. (May 2014). Learning from virtual students. *Educational Leadership*, 71(8).

The article provides information on TLE TeachLivE, a computer-simulated virtual classroom that uses avatars as students to help train teachers and improve their practice. It notes that the resource has been used to help teachers develop skills in scaffolding, behavior monitoring, and asking content-related questions. Particular attention is given to how TeachLivE is used at the University of Central Florida, which incorporates individual sessions, small-group sessions, and whole-class sessions.

Dotger, B.H., & Walker, J.M.T. (January/February 2012). Because wisdom can't be told: using comparison of simulated parent-teacher conferences to assess teacher candidates' readiness for family-school partnership. *Journal of Teacher Education*, 63(1).

This study used text-related, video-based case materials to assess teacher candidates' readiness to communicate with families. Participants (N = 141) rated their efficacy for home-school

communication and then responded to a description of a classroom-based challenge regarding one student's behavioral and academic performance. Next, they evaluated two videos, each capturing how a teacher addressed the challenge in a parent-teacher conference. Cases offered contrasting models of communication effectiveness along two dimensions: structuring and responsiveness. Finally, candidates chose which model did the better job and justified their choice. Findings revealed that candidates had high self-efficacy for communicating with families but generated a small number and range of strategies for dealing with the situation; could discriminate between the models' effectiveness; and their reasons for choosing one model as best centered on their valuing of structuring or responsiveness and their conceptions of partnership. Content validity and reliability assessments of the research materials are described.

Dotger, B.H. (2011). Instructional applications of simulated interactions within teacher education. *Teacher Education and Practice*, 24(2), 132-148.

The induction years of teaching challenge novice educators to quickly transition from what they learned as teacher candidates into what they can do as emerging professionals. This article outlines a simulated interaction methodology to help bridge teacher preparation and practice. Building from examples of simulated interactions between teacher candidates and standardized individuals, it focuses on four distinct research and instructional applications of the simulated interaction methodology within broader teacher education contexts.

Gregory, S., & Masters, Y. (2012). Real thinking with virtual hats: A role-playing activity for pre-service teachers in Second Life. *Australasian Journal of Educational Technology*, 28(3), 420-440.

Role-plays in a virtual world hold tremendous potential for higher education because they allow synchronous, immersive participation by students located across the globe. They also have the added advantage of allowing students to adopt roles and carry out tasks that are not possible in the real world. In this article, a project that involved pre-service teachers carrying out role-plays based on de Bono's Six Thinking Hats framework is presented. A pilot study was carried out over two years with on-campus students, who performed the role-plays both in a real-life, physical setting and within the virtual world of Second Life. The activity has since been extended to off-campus students exclusively using Second Life. The authors report selected quantitative and qualitative survey data from the pilot study that provide insight into students' perceptions of this style of learning, and discuss the challenges that were encountered and how they were overcome. The future of virtual world-based role-playing as a strategy for teaching and learning is discussed, with a focus on its application to distance education contexts.

Herrington, D. (2010). Evaluation of learning efficiency and efficacy in a multi-user virtual environment. *Journal of Digital Learning in Teacher Education*, 27(2), 65-75.

This study evaluated the multi-user virtual environment (MUVE) known as Second Life, integrated with Moodle and SLOODLE technologies, as an exploratory course delivery platform and for its ability to enable teachers to meet elements of NETS.T. Graduate student participants (N = 17) interacted, constructed simulated schools, and attended classes in the MUVE. The

researcher used pre- and posttest measures of self-efficacy and learning efficiency to understand the effects of the MUVE on participants and their rate of learning to make educational use of the environment. Findings imply that the technologies have potential as a distance-learning platform and as a tool to meet elements of NETS.T. Preparing teachers to use the MUVE for these purposes is likely to require a significant amount of scaffolding.

Rayner, C., & Fluck, A. (2014). Pre-service teachers' perceptions of simSchool as preparation for inclusive education: a pilot study. *Asia-Pacific Journal Of Teacher Education*, 42(3), 212-227.

The shift towards the inclusion of students with disabilities in regular schools has meant that general classroom teachers need to be skilled in educating students with a diverse range of needs and abilities. Together with theoretical study and as a supplement to practical experience, teacher educators have begun to explore virtual and simulated classrooms to help prepare pre-service teachers for the complexity of the teaching profession. In this pilot study, we examined the perspective of pre-service teachers on a classroom simulation program called "simSchool." Two-hour-long tutorial sessions focusing on catering for student diversity and the educational needs of students with autism spectrum disorder were conducted. The pre-service teachers' responses to an 11-item questionnaire are discussed, highlighting the potential of simSchool as well as some current limitations of this approach in the context of Australian teacher education courses.

Service Learning: A learning experience enriched by meaningful community engagement and reflection on civic responsibility

Amaro-Jiménez, C. (2012). Service learning: preparing teachers to understand better culturally and linguistically diverse learners. *Journal Of Education For Teaching*, 38(2), 211-213.

The article focuses on service learning, and its connection on teachers' preparation on educating culturally and linguistically diverse students. It mentions that service learning was developed in a public library in Southwest U.S., and has goals in terms of pedagogical and community needs. It also features the initiative of service learning for pre-service teachers in terms of assisting with homework and other academic assistance, and how service learning may help teachers in developing teaching strategies.

Delano-Oriaran, O. (2014). Engaging pre-service teachers in diverse communities through service-learning: a practical guide for application. *Journal Of Education For Teaching*, 40(2), 186-188.

Pre-service teachers should be exposed to methods that prepare them for diverse classrooms. This article outlines a service-learning checklist that is practical and authentic to use in working with diverse communities. Faculty can adopt the checklist when infusing service-learning into their course. It is hoped that the checklist will guide faculty as they partner with culturally and linguistically diverse communities and engage in service-learning that is authentic.