Information for the November 16, 2012 TeachingWorks Journal Club Meeting

We will discuss the following two articles in this meeting, each of which is summarized at the end of this document:

Cochran-Smith, Marilyn, Matthew Cannady, Kirstin McEachern, Kara Mitchell, Peter Piazza, Christine Power, and Amy Ryan. 2012. Teachers' Education and Outcomes: Mapping the Research Terrain. *Teachers College Record* **114 (10).**

Gansle, Kristin A., George H. Noell, and Jeanne M. Burns. 2012. Do Student Achievement Outcomes Differ Across Teacher Preparation Programs? An Analysis of Teacher Education in Louisiana. *Journal of Teacher Education* **63 (5): 304-317.**

In addition, bibliographic information is below for other relevant articles published in September, October, or November 2012[1]:

Boston, Melissa. 2012. Assessing Instructional Quality in Mathematics. *The Elementary School Journal* **113 (1): 76-104.**
Assessments of instructional quality based on classroom observations and artifacts have the potential to measure and improve mathematics instruction and learning. This article describes the Instructional Quality Assessment (IQA) Mathematics Toolkit and examines its ability to identify the nature and quality of classroom instruction. The IQA assesses elements of ambitious instruction in mathematics; specifically, the level of instructional tasks and task implementation, opportunities for mathematical discourse, and teachers' expectations. Results are reported from a study of 13 middle school teachers in a mid-sized urban district, following a professional development initiative and the adoption of standards-based mathematics curricula. The IQA identified high-quality assignments and student work, and that teachers who utilized cognitively challenging tasks could maintain the cognitive demands in lesson observations. The IQA also identified that observed instruction lacked high-quality whole-group discussions. The article closes by discussing how IQA can provide feedback for instructional improvement at the district level.

Boyd, Maureen P. 2012. Planning and Realigning a Lesson in Response to Student Contributions. *The Elementary School Journal* **113 (1): 25-51.**
What constitutes a successful lesson? A considerable body of literature examines instructional talk; however, little attention has been directed to situations in which teacher intentions (as captured by lesson plan) are stymied by unanticipated student response and the teacher must instantaneously reevaluate and revise an intended lesson. This article scrutinizes specific teacher discourse practices in one English language learner (ELL) classroom when students struggle with a text. Close discourse analysis reveals that this teacher's consistent guided practice of anchoring her questions in student contributions to support students' existing purposes and understandings is not compromised even when this results in extended vocabulary-centered student searches for meaning and a lesson very different from what she intended. The dialogic nature of this lesson talk challenges simplified dichotomies of closed and open questions, as well as established notions of efficient and effective instructional practice. This illustrative case of dialogic teaching explicates the role of contingency in interactive discussion.

Butler, Deborah L., and Leyton Schnellert. 2012. Collaborative inquiry in teacher professional development. *Teaching and Teacher Education* **28 (8):1206-1220.**

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[1] The TeachingWorks journal club covers the following journals: *Journal of Teacher Education, American Educational Research Journal, Elementary School Journal, Journal of Curriculum Studies, Teachers College Record, Educational Evaluation and Policy Analysis, and Teaching and Teacher Education.*

This article presents an in-depth case study of a complex community of inquiry. In this community, teachers worked collaboratively to build from situated assessments of students' learning through reading to refine and monitor practices designed to enhance student learning in their subject-area classrooms. In this report, we present evidence to address three questions: (1) What did inquiry look like within this community?; (2) How was collaboration implicated in teachers' inquiry?; and (3) How was engagement in inquiry related to meaningful shifts in teachers' practice and learning? This research contributes by uncovering important links between teacher inquiry, collaboration, and educational change.

Cochran-Smith, Marilyn, Matthew Cannady, Kirstin McEachern, Kara Mitchell, Peter Piazza, Christine Power, and Amy Ryan. 2012. Teachers' Education and Outcomes: Mapping the Research Terrain. *Teachers College Record* **114 (10).**

Background/Context: Questions about teacher quality, including how teachers ought to be educated and licensed, rank near the top of the educational agenda in the United States. These controversies persist because of lack of consensus about what "teacher quality" means, conflicting claims about the empirical evidence, and public skepticism about the need for formal teacher preparation. Because there has been relatively little research on the outcomes of preparation programs and pathways and because researchers work from diverging paradigms, there are few clear conclusions in this area. **Purpose/Objective/Research Question/Focus of Study:** The purpose of this article is to offer a conceptual analysis of empirical research on teachers' education and outcomes that is linked to the political controversies and policy debates that shape it. Using the concept of research "genres," the article addresses two questions: (1) How have researchers conceptualized and studied the connections between teachers' education and its outcomes, consequences, or results? (2) What are the policy controversies and larger social and political factors that have shaped these genres? **Research Design:** This review focuses on research conducted in the United States since 1998 and published by peer-reviewed journals or centers with peer review procedures. The review includes only empirical research that explicitly examines connections between particular aspects of teachers' education (e.g., certification status, academic background, pathways into teaching, program mission/curriculum, transitions to teaching, life experiences) and specific posteducation outcomes (e.g., teacher preparedness, beliefs, practice, retention, student achievement). **Findings/Results:** The review reveals that there are six distinguishable genres that examine connections between teachers' education and posteducation outcomes: teacher certification and its correlates, teachers' educational backgrounds and the teacher workforce, entry pathways into teaching and their consequences, teacher preparation programs and their graduates, teacher preparation and learning to teach in the early career years, and teachers' life experiences and beliefs/practices. The article analyzes and critiques each genre, including its contributions/limitations and the controversies it addresses. **Conclusions/Recommendations:** The review concludes that there continue to be relatively few studies that connect aspects of teachers' education to outcomes; some genres focus primarily on outcomes related to student achievement, whereas others focus primarily on outcomes related to teacher learning. These genres have grown up relatively separately from one another. The review recommends that all six research genres ought to be taken into account by policymakers, researchers, and practitioners in order to have a rich understandings of teachers' education and outcomes.

Cochran-Smith, Marilyn, and Curt Dudley-Marling. 2012. Diversity in Teacher Education and Special Education. *Journal of Teacher Education* **63 (4): 237-244.**

This article explores the enduring fissure between general and special teacher education by focusing directly on the issues that divide these two fields. In the first part of the article, the authors describe their individual and shared positionalities as scholars and practitioners. Then the article examines differences in the disciplinary traditions that influence the work of general teacher educators and special teacher educators as well as issues related to deficit perspectives and access to the general curriculum. The authors suggest that the lack of a common underpinning is the central cross-cutting reason for the continued deep division between the diversity communities in the two fields. Despite this deep divide, the article argues that it is

imperative to find collaborative spaces that have the potential to unite the diversity communities and build new synergies in general teacher education and special teacher education.

Cochran-Smith, Marilyn, Patrick McQuillan, Kara Mitchell, Dianna Gahlsdorf Terrell, Joan Barnatt, Lisa D'Souza, Cindy Jong, Karen Shakman, Karen Lam, and Ann Marie Gleeson. 2012. A Longitudinal Study of Teaching Practice and Early Career Decisions. *American Educational Research Journal* **49 (5): 844-880.**
Although the turnover rate among beginning teachers has been a major concern for some time, most studies do not link teacher retention with teaching practice. In contrast, this study looks specifically at career decisions coupled with practice. Guided by a view of teaching as social and cultural practice, the study used multiple qualitative data sources, including extensive observations, interviews, and samples of teachers' and students' work. Based on within and cross-case analysis of 15 cases at four distinct time points within a 5-year period, the authors identified multiple patterns of teaching practice linked to early career decisions, which reflect considerable variation in quality of teaching and career trajectory. The authors argue that ''stayers'' and ''leavers'' are not homogeneous groups, as is often assumed in research and policy. Rather, there are multiple variations of practice coupled with career decisions, some desirable and others not, with different implications for policy and practice.

Donaldson, Morgaen L. . 2012. The Promise of Older Novices: Teach For America Teachers' Age of Entry and Subsequent Retention in Teaching and Schools. *Teachers College Record* **114 (10).**
Background/Context: Increasing teacher retirements and persistently high turnover have ignited interest in teacher recruitment and retention in recent years. Nowhere is the need to understand these issues more urgent than in low-income schools. These schools face especially large challenges in attracting and retaining competent and committed teachers. Such schools often experience high levels of turnover and, as a result, are staffed disproportionately by inexperienced teachers who are generally less effective than their more experienced counterparts. In addition to this educational cost, elevated turnover also generates substantial organizational and financial losses for low-income schools. Professionals working in other careers constitute one potential source of teachers for low-income schools. The proportion of midcareer entrants among first-year teachers nationwide nearly doubled in recent years. Although analysts assert that midcareer entrants bring great commitment to teaching, scant research examines whether they stay in teaching longer than individuals who enter teaching directly after college.
Purpose/Objective/Research Question/Focus of Study: The primary purpose of this study is to examine whether older entrants to teaching are more likely than younger recruits to voluntarily remain in low-income schools and the teaching profession as a whole. I also explore whether older new teachers' backgrounds differ from those of younger new teachers and whether they are more likely than their younger counterparts to remain in K–12 school-based jobs (i.e., teaching, working as a specialist or administrator). In addition, I examine whether older new teachers who leave the profession have different reasons for doing so than younger new teachers and whether they enter different occupations after teaching. **Research Design:** I investigate the questions described above using a sample of over 2,000 Teach For America (TFA) teachers who began their careers in schools serving high proportions of low-income and minority children. The sample for my study is drawn from a census of all teachers enrolled in the 2000, 2001, and 2002 TFA cohorts. These teachers would have accumulated 4, 5, or 6 years of teaching experience if they had taught continually. From 3,283 TFA enrollees in these cohorts, 2,029 individuals (62%) responded to an online survey that gathered data on teachers' individual characteristics (e.g., subject matter preparation and assignment; demographic information) and, where relevant, the timing of their first departure from their school and the teaching profession. I used discrete-time survival analysis, logistic regression, and chi-square analysis to analyze the data.
Findings/Results: I found that older TFA entrants to teaching had a lower risk than did younger entrants of leaving low-income schools, the teaching profession, and broader school-based roles. I further found that older entrants' backgrounds differed from younger entrants. Older entrants were significantly more likely than their younger counterparts to be male, to be African American, and to have lived in the locale where they were placed by TFA. Among respondents who left

teaching, older entrants' reasons for doing so differed significantly from those noted by younger entrants. Older entrants to teaching were significantly more likely than younger entrants to cite family or health matters as a very or extremely important factor in their decision to leave. Last, older entrants who left the profession also entered significantly different types of professions than did younger entrants. Most notably, older entrants to teaching were significantly more likely than younger entrants to become a K–12 specialist or administrator after they left the classroom.
Conclusions/Recommendations: Viewed broadly, these findings suggest that older entrants to teaching may prove a promising source of teachers for low-income schools. On all measures, older entrants demonstrated more commitment to low-income schools and the teaching profession than did their younger counterparts. Notably, even though they began their careers in challenging, low-income schools, they left the teaching profession at rates (61.3% in 3 years) that are not that distant from some estimates of attrition of teachers who began their careers in urban schools, some of which were likely less challenging than those where TFA teachers typically work. More broadly, districts seeking to develop human capital across multiple levels of the system might also consider targeting older individuals as a source of new teachers. Not only do these people appear to teach longer, but if they leave teaching, they are more likely than younger entrants to remain in schools in roles other than classroom teacher.

Floden, Robert E. 2012. Teacher Value Added as a Measure of Program Quality: Interpret With Caution. *Journal of Teacher Education* 63 (5): 356-360.
Many states now possess the data and statistical methods that can produce teacher value-added scores and link them to preparation programs. It is important to understand the limitations of these measures and the inferences that they do and do not support. These limitations fall into three categories. First, value-added measures (VAM) provide information about only one of several important dimensions of teacher preparation program quality, focusing on one outcome measure, but not addressing other program characteristics, including the quality of program resources, the appropriateness of program content, and the contributions programs make to teacher learning. Second, comparing programs on the average VAM scores begs the question of whether mean performance is the most appropriate way to look at program quality. Third, the measurement of program graduates' VAM is strongly affected by the labor market for teachers, which weakens the inferences from VAM scores to the quality of preparation programs.

Florian, Lani. 2012. Preparing Teachers to Work in Inclusive Classrooms. *Journal of Teacher Education* 63 (4): 275-285.
The increasing cultural, linguistic, and developmental diversity of today's classrooms demands more inclusive approaches to schooling, but classroom teachers often report feeling unprepared for inclusive education. This article reports some lessons learned from the Inclusive Practice Project, a teacher education reform project that has developed an innovative approach to preparing teachers to enter a profession in which they take responsibility for the learning and achievement of all students. It identifies four crucial issues, describes how they were addressed, and considers the challenges of professional development of teacher educators that emerged from the project studies. Key lessons focusing on the professional development of teacher educators in the establishment of a new curricular approach to teacher education for inclusive education are discussed.

Gansle, Kristin A., George H. Noell, and Jeanne M. Burns. 2012. Do Student Achievement Outcomes Differ Across Teacher Preparation Programs? An Analysis of Teacher Education in Louisiana. *Journal of Teacher Education* 63 (5): 304-317.
Achievement outcomes for students taught by recent program completers of Louisiana's teacher preparation programs (TPPs) are examined using hierarchical linear modeling of State student achievement data in English language arts, reading, mathematics, science, and social studies. The current year's achievement in each content area is predicted using previous achievement data, student characteristics, classroom characteristics (e.g., percentage of students with disabilities), school characteristics, and attendance of teachers and students. The contribution of a teacher having recently completed a specific TPP is modeled at the classroom level as an indicator variable for each TPP. Results for programs with 25 or more new teachers are reported.

Results demonstrate substantial overlap in confidence intervals (CI) among programs. In some instances, 68% and/or 95% CI for programs in specific content areas did not overlap results for the average new teacher or experienced teachers (i.e., they were lower than average new teachers or higher than average experienced certified teachers). Results varied across content areas for some programs.

Guo, Ying, Carol McDonald Connor, Yanyun Yang, Alysia D. Roehrig, and Frederick J. Morrison. 2012. The Effects of Teacher Qualification, Teacher Self-Efficacy, and Classroom Practices on Fifth Graders' Literacy Outcomes. *The Elementary School Journal* **113 (1): 3-24.**
This study examined the effects of teacher self-efficacy, education, and years of experience on observed classroom practices across 2 dimensions—teacher support for student learning and time in academics—as they related to fifth-grade students' (n=1,043) literacy skills. To address these issues, the study used longitudinal data from the National Institute of Child Health and Human Development (NICHD) Study of Early Child Care and Youth Development. Teacher self-efficacy is assessed on a survey that indicates the extent to which teachers believe they can make a difference in their students' achievement. Structural equation modeling results indicated that teachers with a higher sense of self-efficacy showed more support and provided a more positive classroom environment than did teachers with lower self-efficacy; in addition, their students had stronger literacy skills. Teachers with greater self-efficacy and more years of experience spent less time in academics.

Henry, Gary T., David C. Kershaw, Rebecca A. Zulli, and Adrienne A. Smith. 2012. Incorporating Teacher Effectiveness Into Teacher Preparation Program Evaluation. *Journal of Teacher Education* **63 (5):335-355.**
New federal and state policies require that teacher preparation programs (TPP) be held accountable for the effectiveness of their graduates as measured by test score gains of the students they teach. In this article, the authors review the approaches taken in several states that have already estimated TPP effects and analyze the proposals for incorporating students' test score gains into the evaluations of TPP by states that have received federal Race to the Top funds. The authors organize their review to focus on three types of decisions that are required to implement these new accountability requirements: (a) selection of teachers, students, subjects, and years of data; (b) methods for estimating teachers' effects on student test score gains; and (c) reporting and interpretation of effects. The purpose of the review is to inform the teacher preparation community on the state of current and near term practice for adding measures of teacher effectiveness to TPP accountability practices.

Irvine, Jacqueline Jordan. 2012. Complex Relationships Between Multicultural Education and Special Education. *Journal of Teacher Education* **63 (4):268-274.**
Multicultural education and special education share historical roots, philosophies, theories, and pedagogies that provide unique opportunities to address the many challenges of underserved K-12 students. Without a more refined and critical analysis, however, the shared similarities could possibly mask the tensions and the complexities inherent in a relationship that directly confronts thorny and nuanced intersections of race, social class, gender, disability, and culture. This article focuses on the complexity of the relationship between multicultural education and special education from an African American perspective by exploring areas of divergence and conflict between special and multicultural education, specifically issues of disproportionate representation, cultural misunderstandings, tensions between home and school, and competition for limited resources. Finally, recommendations are offered that can more effectively prepare K-12 special education teachers who serve students who are culturally diverse and disabled

Marsh, Julie A. . 2012. Interventions Promoting Educators' Use of Data: Research Insights and Gaps. *Teachers College Record* **14 (11).**
Background/Context: In recent years, states, districts, schools, and external partners have recognized the need to proactively foster the use of data to guide educational decision-making and practice. Understanding that data alone will not guarantee use, individuals at all levels have

invested in interventions to support better access to, interpretation of, and responses to data of all kinds. Despite the emergence of these efforts, there has been little systematic examination of research on such efforts. **Purpose/Objective/Research Question/Focus of Study:** This article synthesizes what we currently know about interventions to support educators' use of data—ranging from comprehensive, system-level initiatives, such as reforms sponsored by districts or intermediary organizations, to more narrowly focused interventions, such as a workshop. The article summarizes what is what is known across studies about the design and implementation of these interventions, their effects at the individual and organizational levels, and the conditions shown to affect implementation and outcomes. **Research Design:** Literature review. **Data Collection and Analysis:** This review entailed systematic searches of electronic databases and careful sorting to yield a total of 41 books, peer-reviewed journal articles, and reports. Summaries of each publication were coded to identify the study methods (design, framework, sample, time frame, data collection), intervention design (level of schooling, focal data and data user, leverage points, components), and findings on implementation, effects, and conditions. **Findings/Results:** The review uncovers a host of common themes regarding implementation, including promising practices (e.g., making data "usable" and "safe," targeting multiple leverage points) and persistent challenges (e.g., developing support that is generic but also customized, sustaining sufficient support). The review also finds mixed findings and levels of research evidence on effects of interventions, with relatively more evidence on effects on educators' knowledge, skills, and practice than on effects on organizations and student achievement. The article also identifies a set of common conditions found to influence intervention implementation and effects, including intervention characteristics (capacity, data properties), broader context (leadership, organizational structure), and individual relationships and characteristics (trust, beliefs and knowledge). **Conclusions/Recommendations:** The review finds that the current research base is limited in quantity and quality. It suggests the need for more methodologically rigorous research and greater attention to the organizational and student-level outcomes of interventions, comparative analyses, interventions that help educators move from knowledge to action, and specific ways in which the quality of data and leadership practices shape the effectiveness of interventions.

Monte-Sano, Chauncey, and Kristen Harris. 2012. Recitation and Reasoning in Novice History Teachers' Use of Writing. *The Elementary School Journal* 113 (1):105-130.
Using artifacts of teachers' practices, classroom observations, and interviews, we explore how 2 novice history teachers use writing in their middle school classrooms. Both teachers focused on evidence-based, interpretive writing in their preservice work, an approach promoted by their methods courses. After graduation, one teacher continued this focus and improved his ability to scaffold his students' essay writing. The second teacher emphasized summary of content and proper formatting in her use of writing, although some of her assignments integrated evidence-based interpretive writing. These case studies illustrate how 2 similarly prepared teachers convey entirely different notions of history through their use of writing. These teachers' school contexts and disciplinary understandings influence their use of writing. Their experiences make the case for integrating general literacy skills with disciplinary literacy and practicing historical writing instruction in different contexts during teacher education in order to meet the demands novices face in diverse school contexts.

O'Neill, Sue, and Jennifer Stephenson. 2012. Does classroom management coursework influence pre-service teachers' perceived preparedness or confidence? *Teaching and Teacher Education* 28 (8):1131-1143.
There has been conjecture that completing focused coursework units on classroom management during pre-service teacher preparation might lead to increased feelings of preparedness and confidence. This study reports the preparedness in managing specific problem behaviours, familiarity, and confidence in using management strategies and models of final-year pre-service teachers in Australia who had and had not completed focused classroom management units. Unit completion significantly increased perceived preparedness, familiarity, and confidence in using strategies and models. However, the whole sample felt only somewhat prepared to manage misbehaviour, and were confident in using only half of the strategies they were familiar with.

Plecki, Margaret L., Ana M. Elfers, and Yugo Nakamura. 2012. Using Evidence for Teacher Education Program Improvement and Accountability: An Illustrative Case of the Role of Value-Added Measures. *Journal of Teacher Education* 63 (5):318-334.

In this article, the authors consider what can be learned from limited forms of evidence, for purposes of accountability and improvement of teacher education programs. They begin with a review of recent research on how evidence has been used to examine the effectiveness of teacher preparation and development. Using empirical evidence from a state with limited data capacity, they illustrate what can be learned from value-added measures as one form of evidence. As a case in point, the value-added scores for fifth-grade teachers are used to answer the question: To what extent are teachers' years of experience and the institutions from which they obtained their teacher training related to student achievement? The authors conclude with a discussion of the use of evidence by shifting the focus of accountability from simply responding to external requirements to developing internal practices that generate knowledge for improvement, and argue for collective responsibility among multiple stakeholders.

Ramlo, Susan. 2012. Inservice science teachers' views of a professional development workshop and their learning of force and motion concepts. *Teaching and Teacher Education* 28 (7):928-935.
Teacher attitudes affect their instruction such that positive teacher attitudes enhance the teaching and learning process. The purpose of this study was to explore inservice science teachers' views of learning physics within the context of a professional development experience and to investigate the relationship between those views and the teachers' understanding of force and motion concepts. The conceptual understanding pretest results indicate the need for inservice science teacher professional development that focuses on conceptual understanding. The relationship between participants' views and their conceptual understanding at posttest has additional implications for the curriculum for these science teachers' professional development experiences.

Rigelman, Nicole Miller, and Barbara Ruben. 2012. Creating foundations for collaboration in schools: Utilizing professional learning communities to support teacher candidate learning and visions of teaching. *Teaching and Teacher Education* 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.

Ronfeldt, Matthew, and Michelle Reininger. 2012. More or better student teaching? *Teaching and Teacher Education* 28 (8):1091-1106.
Drawing from data on over 1000 prospective teachers in a large urban district including pre and post-student teaching survey data, this study investigates whether lengthening student teaching improves teachers' perceptions of instructional preparedness, efficacy, and career plans. The findings suggest that the duration of student teaching has little effect on teacher outcomes; however, the quality of student teaching has significant and positive effects. Moreover, the magnitude of the effects of student teaching quality are greater when student teaching is shorter and in schools with more historically underserved racial groups. The authors discuss policy implications and directions for further research.

Rozelle, Jeffrey J., and Suzanne M. Wilson. 2012. Opening the black box of field experiences: How cooperating teachers' beliefs and practices shape student teachers' beliefs and practices. *Teaching and Teacher Education* 28 (8):1196-1205.
This study employed ethnographic methods to describe and explain changes to beginning science teachers' practices and beliefs during a year long internship. Teaching practices were

strongly influenced by the cooperating teachers. Initially, all six interns attempted to re-enact lessons they witnessed their cooperating teachers teach, including following lesson structures and borrowing representations, anecdotes, and jokes. Later, they independently implemented instruction that emphasized similar strategies as their mentors, regardless of whether or not they were experiencing success. Interns who were successful also shifted their beliefs to match their mentors.

Rueda, Robert, and Jamy Stillman. 2012. The 21st Century Teacher. *Journal of Teacher Education* **63 (4): 245-253.**
In this article, the authors focus on the disciplinary divides between multicultural, bilingual, and special education. Existing issues that inhibit closer integration of these areas are highlighted, and a focus on the issue of culture is examined. Problematic ways that this key area has been treated in the past are described, and a proposal for a cultural focus on all students is described.

Rytivaara, Anna, and Ruth Kershner. 2012. Co-teaching as a context for teachers' professional learning and joint knowledge construction. *Teaching and Teacher Education* **28 (7):999-1008.**
The study examined two primary teachers' professional learning and joint knowledge construction in the context of co-teaching. The teachers narrated their learning as a collaborative process with serendipitous origins. Shared knowledge construction was crucial in the learning process, as was implementing the resulting new ideas in practice. It is concluded that experiences of co-teaching may support teachers in meeting their professional responsibilities effectively. Professional development programmes need to be sensitive to teachers' individual and collaborative learning experiences to be able better to support them in the natural context of those experiences in particular local and national contexts.

Saigal, Anju. 2012. Demonstrating a situated learning approach for in-service teacher education in rural India: The Quality Education Programme in Rajasthan. *Teaching and Teacher Education* **28 (7):1009-1017.**
Recent educational policy in India has repositioned elementary school teachers as active, reflective practitioners, not just , "deliverers," of syllabus material. This article examines innovations in teacher support in Rajasthan's government schools through the "Quality Education Program." Drawing on qualitative research of collaborative learning processes, the paper discusses two support strategies used by the program: professional dialogic interactions and modeling of pedagogic strategies, which paralleled introductory or developmental phases within a "collaborative apprenticeship model," of teacher professional development. In doing so, the paper outlines the potential of situated, collaborative approaches for Indian in-service teacher education and education development reform, more broadly.

Schmidt, Sandra J., Shih-pei Chang, Aliah Carolan-Silva, John Lockhart, and Dorothea Anagnostopoulos. 2012. Recognition, responsibility, and risk: Pre-service teachers' framing and reframing of lesbian, gay, and bisexual social justice issues. *Teaching and Teacher Education* **28 (8):1175-1184.**
This paper presumes teachers play crucial roles in making more just societies and teacher educators must decide how they will participate in and/or shape a global dialog about LGB rights with pre-service teachers. This paper utilizes Fraser's theory of justice to consider curricular change. It examines the values and experiences pre-service teachers bring to their university education that shape their interaction with curricula. Analysis of classroom dialog suggests that pre-service teachers have a more complex understanding of structure and transformation than their nascent language around sexuality allows them to articulate. These optimistic findings lead to proposals for transforming how we teach about sexuality.

Sleep, Laurie, and Timothy A. Boerst. 2012. Preparing beginning teachers to elicit and interpret students' mathematical thinking. *Teaching and Teacher Education* **28 (7): 1038-1048.**

This study investigated how teacher education assignments can be designed to support beginning teachers in learning to do the work of teaching. We examined beginners' formative assessment practices, in particular, their eliciting and interpreting of students' mathematical thinking, in the context of an elementary mathematics methods assignment, and the ways in which the scaffolds provided shaped their practice. We found that the scaffolds differentially supported their practice and suggest strategic improvement of the focus and organization of different types of scaffolds. Findings from the study contribute to the conceptualization and design of scaffolds for practice-based learning opportunities in teacher education.

Tigchelaar, Anke, Jan D. Vermunt, and Niels Brouwer. 2012. Patterns of development in second-career teachers' conceptions of learning and teaching. *Teaching and Teacher Education* **28 (8):1163-1174.**
This study was aimed at deepening our understanding of second-career teachers' conceptions of teaching and learning. Initial conceptions held by 207 candidates entering an alternative teacher education programme were explored using a semi-structured questionnaire covering background characteristics and four themes concerning teaching and learning. A limited number of distinct conceptions could be identified and related to respondents' background characteristics. After the first semester of the programme, three patterns of development were found in a subset of 70 participants: growth, consolidation and regression. Pedagogical implications for fostering growth in second-career teachers are discussed.

Yang, Ya-Ting Carolyn. 2012. Cultivating critical thinkers: Exploring transfer of learning from pre-service teacher training to classroom practice. *Teaching and Teacher Education* **28 (8):1116-1130.**
This study explores the transfer of critical thinking skills and dispositions from pre-service teacher training to classroom practice and student achievement in the cases of two graduates from a course on critical thinking-integrated instruction. Two 7th and two 8th grade classes were randomly assigned as experimental (CT-integrated instruction), or comparison (traditional instruction) groups. Empirical results demonstrated that, in these two cases, the teachers successfully developed CT-integrated instruction for effectively fostering students' CT skills and dispositions, while improving student achievement. Future research should include larger and more representative samples to avoid bias and reliably evaluate CT-based teacher training initiatives.

Summary:

Cochran-Smith, Marilyn, Matthew Cannady, Kirstin McEachern, Kara Mitchell, Peter Piazza, Christine Power, and Amy Ryan. 2012. Teachers' Education and Outcomes: Mapping the Research Terrain. *Teachers College Record* 114 (10).

Abstract:
Background/Context: Questions about teacher quality, including how teachers ought to be educated and licensed, rank near the top of the educational agenda in the United States. These controversies persist because of lack of consensus about what "teacher quality" means, conflicting claims about the empirical evidence, and public skepticism about the need for formal teacher preparation. Because there has been relatively little research on the outcomes of preparation programs and pathways and because researchers work from diverging paradigms, there are few clear conclusions in this area. **Purpose/Objective/Research Question/Focus of Study:** *The purpose of this article is to offer a conceptual analysis of empirical research on teachers' education and outcomes that is linked to the political controversies and policy debates that shape it. Using the concept of research "genres," the article addresses two questions: (1) How have researchers conceptualized and studied the connections between teachers' education and its outcomes, consequences, or results? (2) What are the policy controversies and larger social and political factors that have shaped these genres?* **Research Design:** *This review focuses on research conducted in the United States since 1998 and published by peer-reviewed journals or centers with peer review procedures. The review includes only empirical research that explicitly examines connections between particular aspects of teachers' education (e.g., certification status, academic background, pathways into teaching, program mission/curriculum, transitions to teaching, life experiences) and specific posteducation outcomes (e.g., teacher preparedness, beliefs, practice, retention, student achievement).* **Findings/Results:** *The review reveals that there are six distinguishable genres that examine connections between teachers' education and posteducation outcomes: teacher certification and its correlates, teachers' educational backgrounds and the teacher workforce, entry pathways into teaching and their consequences, teacher preparation programs and their graduates, teacher preparation and learning to teach in the early career years, and teachers' life experiences and beliefs/practices. The article analyzes and critiques each genre, including its contributions/limitations and the controversies it addresses.* **Conclusions/Recommendations:** *The review concludes that there continue to be relatively few studies that connect aspects of teachers' education to outcomes; some genres focus primarily on outcomes related to student achievement, whereas others focus primarily on outcomes related to teacher learning. These genres have grown up relatively separately from one another. The review recommends that all six research genres ought to be taken into account by policymakers, researchers, and practitioners in order to have a rich understandings of teachers' education and outcomes.*

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In this review of peer-reviewed research on teacher education and its outcomes, the authors included research published since 1998 that focused on (a) "one or more aspects of teachers' education or licensure with (2) one or more aspects of the post preparation consequences, outcomes, developments, and/or effects of these" in the US context (Cochran-Smith et al. 2012, p. 7). The authors' goal is to cut across the varying and often divergent theoretical frameworks, research methodologies, disciplines, and policy contexts of research on teacher education and its outcomes. They contend that these studies fall into six genres, which, they argue, are conceptually and methodologically distinct.[2] The six genres are:

1. teacher certification and its correlates,
2. teachers' educational backgrounds and the teacher workforce,
3. entry pathways into teaching and their consequences,

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[2] The authors build upon M. Kennedy's analysis of genres as coherent categories with distinct and consistent ways of thinking about the effects of teacher education (Kennedy 1991).

4. teacher preparation programs and their graduates,
5. teacher preparation and learning to teach in the early career years,
6. and teachers' life experiences and beliefs/practices.

The authors argue that each genre focuses on *one* key aspect of teacher education (i.e., licensure, certification, life histories, transition from TE to practice, etc.), but *many* different outcomes (i.e., students' tests scores, teacher preparedness, retention, distribution, etc.). As summarized in the table appended here, genres 1, 2 and sometimes 3 are primarily quantitative analyses authored by social scientists seeking to inform both federal and state policy. In contrast, research in genres 5, 6 and sometimes 3 are primarily qualitative analyses performed by teacher educators and researchers, often focusing on small data sets. Pieces in these genres focus on "processes of learning to teach and teachers' development and career paths over time" (Cochran-Smith et al. 2012, p. 36).

Summarizing recent research in each of these genres, the authors detail strengths and limitations of each genre, linking these to research method, theoretical framework and audience.

Key problems, according to the authors:
- Policymakers, researchers, and practitioners do not read *across* genres; multiple research approaches are rarely combined in the same research (p. 4).
- Competing political agendas shape discussion about reform of teacher education – in particular the divergent pushes for professionalization and deregulation.

Findings/Arguments:
- Despite increasing interest in teacher education, the authors found relatively few studies that empirically test the effects or outcomes of teacher education (p. 35). They point to lack of funding, research expertise, infrastructure, measurement expertise, and databases as explanation for the dearth of peer-reviewed research.
- There continues to be significant disagreement about what outcomes of teacher education should be studied. "Outcomes" include student test scores, teacher retention, teacher commitments, teachers' skill and performance. Only the first, according to the authors, is "in sync with the current accountability regime" (Cochran-Smith et al. 2012, p. 38).
- The different genres – in particular genres 1, 2 and 5 and 6 "have grown up and operate substantially separately" from each other (Cochran-Smith et al. 2012, p. 37). The authors strongly recommend "cross-referencing" across genres to enable a "richer picture" of the relationship between teacher education and outcomes, which they write no one genre can provide alone.

Figure 2. Six genres and their features

	Aspects of Teachers' Education Studied	Outcome Studied	Assumed Relationship between Teachers' Education and Outcomes	Discipline(s)/ Theoretical Framework(s)	Research Method(s)	Audience(s)
GENRE 1: Teacher Certification Status and Its Correlates	Teacher certification status	Pupil test scores; distribution of teachers	If effective, certification policy can redistribute quality teachers and/or increase student achievement.	Social science, especially economics and sociology/ variance theory	Complex statistical models, including hierarchical linear modeling (HLM) and value added modeling	State and national policymakers who control requirements for certification and/or accreditation
GENRE 2: Teachers' Educational Backgrounds and the Teacher Workforce	Teachers' academic competence	Pupil test scores; distribution of teachers; preparedness	If effective, policies regarding subject-matter and/or academic background can improve practice and/or increase student achievement.	Social science, especially economics and sociology/ variance theory	Complex statistical models, including HLM and hierarchical generalized linear modeling	State and national policymakers who control requirements for certification and/or accreditation, especially academic knowledge
GENRE 3: Entry Pathways into Teaching and Their Consequences	Entry pathways into teaching or program structures	Preparedness; career trajectories; pupil test scores; pedagogy and practice; beliefs; distribution of teachers	If effective, policies regarding entry pathway/program structures can increase retention, improve practice, and/or increase student achievement.	Social science, especially economics and sociology/ variance theory	Complex statistical models, including general linear modeling; mixed methods	Local, state, and national policymakers who control entry requirements and/or establish program structures
GENRE 4: Teacher Preparation Programs and Their Graduates	Curriculum or mission of particular preparation programs/ pathways	Pedagogy and practice; career trajectories; beliefs; preparedness; distribution of teachers	If effective, professional teacher education can improve practice and increase preparedness and/or retention.	Curriculum and instruction/ constructivist, sociocultural theories, including developmental and social justice theory	Case studies; observations and interviews; surveys; evaluation studies	Teacher education practitioners and researchers; local, state, and national policymakers
GENRE 5: Transition from Preparation or Preteaching into Teaching	Beliefs and experiences of graduates from traditional and alternative teacher education programs	Pedagogy and practice; preparedness; career trajectories	If effective, professional teacher education can improve practice and/or increase retention.	Curriculum and instruction/ constructivist, sociocultural theories, including activity theory and cultural-historical activity theory	Single- and cross-case studies; observations and interviews; surveys	Teacher education practitioners and researchers; local, state, and national policymakers, especially professional accreditors
GENRE 6: Teachers' Life Histories and Their Beliefs and Practices	Life histories or teachers' experiential backgrounds	Beliefs; pedagogy and practice	Understanding teachers' life histories can help preparation programs better support candidates from diverse backgrounds.	Curriculum and instruction and sociology/ sociocultural theories, including identity theory	Single- and cross-case studies; self-studies;	Teacher education practitioners and researchers, and local policymakers

The above table taken directly from (Cochran-Smith et al. 2012, p. 37).

Summary:

Gansle, Kristin A., George H. Noell, and Jeanne M. Burns. 2012. Do Student Achievement Outcomes Differ Across Teacher Preparation Programs? An Analysis of Teacher Education in Louisiana. *Journal of Teacher Education* 63 (5):304-317.

Abstract:
Achievement outcomes for students taught by recent program completers of Louisiana's teacher preparation programs (TPPs) are examined using hierarchical linear modeling of State student achievement data in English language arts, reading, mathematics, science, and social studies. The current year's achievement in each content area is predicted using previous achievement data, student characteristics, classroom characteristics (e.g., percentage of students with disabilities), school characteristics, and attendance of teachers and students. The contribution of a teacher having recently completed a specific TPP is modeled at the classroom level as an indicator variable for each TPP. Results for programs with 25 or more new teachers are reported. Results demonstrate substantial overlap in confidence intervals (CI) among programs. In some instances, 68% and/or 95% CI for programs in specific content areas did not overlap results for the average new teacher or experienced teachers (i.e., they were lower than average new teachers or higher than average experienced certified teachers). Results varied across content areas for some programs.

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The authors studied student achievement outcomes for program completers across teacher preparation programs (TPPs) in Louisiana. Interested in "the extent to which programs, pathways, or practices in teacher education influence student outcomes as measured by state-administered standardized tests" (Gansle, Noell, and Burns 2012, p. 305), the authors investigated the degree to which coefficients for recent program completers from specific TPPs varied across institutions and content domains. The authors examined longitudinal data on student achievement[3] as well as demographic variables (i.e., free lunch status, disability status, attendance, etc.). The "result estimates the degree to which students taught by new teachers from specific TPPs achieve more or less than would be predicted based on an extensive set of student, class, and school predictors in ELA, reading, mathematics, science, and social studies" (Gansle, Noell, and Burns 2012, p. 308).

The authors note the "inadequate literature base… linking student achievement outcomes to teachers, teaching, or how teachers are prepared " (Gansle, Noell, and Burns 2012, p. 312). In particular, they write that there is a dearth of evidence on the relationship between teacher preparation and student learning outcomes.

They write that a number of factors make studying the relationship between TPP and student outcomes difficult:

- TPPs are complex, and have multiple independent and dependent parts (i.e., recruitment, methods, content, professional values, etc.).
- There is a lack of longitudinal data linking students (and data about these students), teachers, and TPPs.
- There continue to be problems – namely (1) data availability (i.e., do not have scores for students on all subjects), and (2) yearly student achievement scores might reflect previous achievement. VAM has been developed largely in response to this problem. The authors acknowledge the potential weaknesses of VAM.

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[3] Student achievement included scores for iLEAP (version of the Iowa Tests of Basic Skills) and the LEAP (Louisiana Educational Assessment program used for Grades 4 and 8) in five content areas: English-language arts (ELA), reading, mathematics, science, and social studies. In all the authors examined achievement scores from the State's mandated testing programs in Grades 3-9.

The 1999-2000 Louisiana's Blue Ribbon Commission for Teacher Quality crafted 60 recommendations for the recruitment, selection, preparation and support of "quality" teachers. The author's analysis was enabled by the data base system for linking student achievement to teachers to TPPs (including: institutional performance – Praxis passage rates, new teacher satisfaction rates; quantity of program completers; and, achievement of students taught by TPP's new teachers) which was also set up by the Commission.

Methods:
- Three-level HLM, students nested within teachers nested within schools and TPP coefficients extracted at the teacher level.
- The authors tabulated average new teacher effects – averaging all teachers with two or fewer years experience to produce the mean effect for new teachers.
- Some TPPs were excluded because they were being redesigned and the state of Louisiana provided data only for post-redesigned TPPs. Results were obtained for exemplars of all four types of TPPs in Louisiana: two undergraduate programs, two MA alternate certification programs, and four Practitioner Teacher Programs – two at institutions of higher education and two private, non-university providers.

Results:
- See tables, attached, for results. In brief: three programs had coefficients higher than average new teacher results: "Private Practitioner TPP2, Masters Alternate Certification Program 1, and University Practitioner Program 2" (Gansle, Noell, and Burns 2012, p. 311).

Limitations:
- Limited data: data only included for programs that have already been redesigned; no data on early elementary teachers; no data for teachers of band, art, PE.
- "Socially significant" but absolute magnitudes of coefficients not large: "in many cases the TPP coefficients are two times the magnitude of the coefficients for free lunch status as an indicator of socioeconomic disadvantage" (Gansle, Noell, and Burns 2012, p. 313).
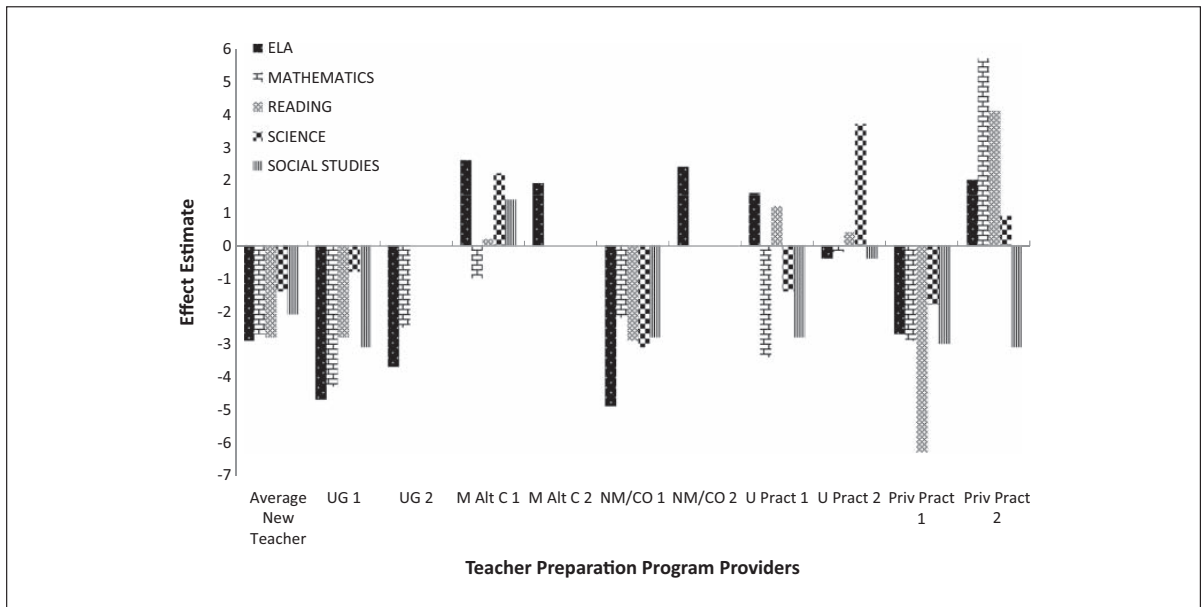- Do not clarify the *elements* of TE programs that contribute to observed differences.

Conclusions/Findings:
- The analysis confirms the reality that teacher education is comprised of a complicated set of "moving parts" that may be "complimentary, compensatory, or conflicting" (Gansle, Noell, and Burns 2012, p. 314). Unpacking elements of TPP that link to student achievement is challenging because of these moving parts.
- The authors' final sentence, "we raise these concerns to surface the complexity and subtlety of the work needed to generate the sort of broadly applicable knowledge the field needs," is directly confirming of Cochran et al.'s suggestion that cross-genre analyses are needed (Cochran-Smith et al. 2012).
- Importantly, the authors conclude with a warning about the limits of value-added data: "as with all value-added data, the results do not answer why a particular result occurred or what might be done to improve on it; rather, all it does is provide feedback on performance, focus program improvement efforts, and provide a benchmark that helps sustain a focus on continuous program improvement" (Gansle, Noell, and Burns 2012, p. 312).

Table 3. Teacher Preparation Program Coefficients with 68% Confidence Intervals in All Content Areas

	Abbreviation	ELA	Mathematics	Reading	Science	Social studies
Average new teacher		−2.9	−2.7	−2.8	−1.4	−2.1
Undergraduate Program 1	UG 1	−4.7 (−6.2, −3.2)	−4.3 (−6.4, −2.2)	−2.8 (−4.1, −1.5)	−0.8 (−2.5, 0.9)	−3.1 (−4.6, −1.6)
	n	68	59	49	39	55
Undergraduate Program 2	UG 2	−3.7 (−6.0, −1.4)	−2.5 (−4.3, −0.7)			
	n	25	25			
Master's Alternate Certification Program 1	M Alt C 1	2.6 (−0.2, 5.4)	−1.0 (−2.9, 0.9)	0.2 (−2.3, 2.7)	2.2 (0.0, 4.4)	1.4 (−0.6, 3.4)
	n	41	46	30	39	42
Master's Alternate Certification Program 2	M Alt C 2	1.9 (−0.7, 4.5)				
	n	25				
Non-Master's/ Certification Only Program 1	NM/CO 1	−4.9 (−6.7, −3.1)	−2.2 (−3.9, −0.6)	−2.9 (−4.8, −0.9)	−3.1 (−5.2, −1.0)	−2.8 (−5.3, −0.3)
	n	69	59	58	43	50
Non-Master's/ Certification Only Program 2	NM/CO 2	2.4 (−0.8, 5.6)				
	n	26				
Practitioner TPP 1	U Pract 1	1.6 (−0.9, 4.1)	−3.4 (−5.4, −1.4)	1.2 (−0.9, 3.5)	−1.4 (−3.7, 0.9)	−2.8 (−5.4, −0.2)
	n	36	43	35	29	40
Practitioner TPP 2	U Pract 2	−0.4 (−2.6, 1.8)	−0.2 (−3.2, 2.8)	0.4 (−1.8, 2.6)	3.7 (1.8, 5.6)	−0.4 (−2.0, 1.2)
	n	46	47	44	28	29
Private practitioner TPP 1	PrivPract 1	−2.7 (−4.4, −1.0)	−2.9 (−4.6, −1.2)	−6.3 (−8.3, −4.3)	−1.8 (−3.2, −0.4)	−3.0 (−5.3, −0.7)
	n	43	47	35	43	28
Private practitioner TPP 2	PrivPract 2	2.0 (−0.4, 4.4)	5.7 (4.0, 7.4)	4.1 (1.2, 7.0)	0.9 (−1.3, 3.1)	−3.1 (−6.2, 0.1)
	n	41	55	30	37	32

Figure 2. Coefficient of difference between predicted and actual achievement for teacher preparation programs

Cochran-Smith, Marilyn, Matthew Cannady, Kirstin McEachern, Kara Mitchell, Peter Piazza, Christine Power, and Amy Ryan. 2012. Teachers' Education and Outcomes: Mapping the Research Terrain. *Teachers College Record* 114 (10).

Gansle, Kristin A., George H. Noell, and Jeanne M. Burns. 2012. Do Student Achievement Outcomes Differ Across Teacher Preparation Programs? An Analysis of Teacher Education in Louisiana. *Journal of Teacher Education* 63 (5):304-317.