Information for the September 9, 2016 TeachingWorks Journal Club Meeting

We will discuss the following two articles in this meeting:

1. Brownell, M., Sindelar, P., Kiely, M., & Danielson, L. (2010). Special Education Teacher Quality and Preparation: Exposing Foundations, Constructing a New Model. *Exceptional Children*, 76(3), 357–377.

2. Rock, ML, Spooner, F, Nagro, S, & Vasquez, E. (2016). 21st Century Change Drivers Considerations for Constructing Transformative Models of Special Education Teacher Development. *Teacher Education and Special Education, 39(2), 98-120.*

In addition, bibliographic information is below for other relevant articles published in the following journals between February 15, 2015 and August 15, 2016.[1]

Action in Teacher Education
American Educational Research Journal
Educational Evaluation and Policy Analysis
Elementary School Journal
Journal of Education for Teaching: International Research and Pedagogy
Journal of Teacher Education
New Educator
Teachers College Record
Teaching and Teacher Education
Urban Review

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Ateşkan, A. (2016). Pre-service teachers' cultural and teaching experiences abroad. *Journal of Education for Teaching*, *42*(2): 135-148.

> This study investigates Turkish pre-service teachers' experiences related to a two-month international teaching and cultural experience in the United States of America. In total, 289 graduate students from Turkey participated in a collaborative project from 2001 to 2010. The experience included an orientation week, six weeks of student teaching in a high school, seminars and projects at Iowa State University and cultural visits. The data were collected through a pre-service teacher questionnaire and their reflective journals. The results showed that pre-service teachers perceived the international teaching experience helped them develop professionally and personally. Through cross-cultural exchanges with their mentors along with other students and their community, the pre-service teachers expanded their knowledge of a new culture and adapted to a new working environment.

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[1] For the September 9, 2016, TeachingWorks journal club we considered the following journals: *Action in Teacher Education (38(1); 38(2)); American Educational Research Journal (February 2016, 53(1); April 2016, 53(2); June 2016, 53(3)); Educational Evaluation and Policy Analysis (June 2016, 38(2)); Elementary School Journal (March 2016, 116(3); June 2016, 116(4)); Journal of Education for Teaching: International Research and Pedagogy (2016, 42(2); 42(3)); Journal of Teacher Education (May/June 2016, 67(3)); New Educator (April 2016, 12(2); June 2016, 12(3)); Teachers College Record (118(3); 118(4); 118(5); 118(6); 118(7)); Teaching and Teacher Education (April 2016, 55; May 2016, 56; July 2016, 57; August 2016, 58); Urban Review (March 2016, 48(1); June 2016, 48(2)).*

Baker, S. and J.O. Milner (2016). Building discretionary authority in a teacher education program. *Action in Teacher Education*, *38*(2): 91-103.

>This article reports on a teacher education program's use of teaching rounds and action research to build teacher candidates' discretionary authority, the confidence to make their own teaching decisions rather than model their classroom choices solely on a mentor teacher's classroom pedagogy. Discretionary authority is promoted by many contemporary business and government organizations as a central feature of the transformational leadership that Burns long ago contrasted with transactional leadership. The impact of candidates' discretionary authority is validated by the top marks awarded by their principals and mentors on the NC Department of Public Instructions IHE Performance Report. Their independence of mind is further corroborated by the important accomplishments they achieved in their first 5 years of teaching.

Bennett, L.H., Athanases, S.Z., and J.M. Wahleithner (2016). "Like a ball and glove": Teachers' conceptions of the promise and challenges of conducting classroom inquiry. *Action in Teacher Education*, *38*(1): 49-69.

>Teacher inquiry holds promise in teacher education, but only if student teachers take up inquiry practices as they leave preservice and transition to teaching. As they learn to conduct inquiry during preservice, student teachers may begin to internalize dispositions that promote ongoing inquiry experiences. Through analysis of questionnaires conducted at preservice and inservice, and through a focus group discussion, the authors sought to understand how teachers who had experienced one scaffolded, student-focused, and data-based preservice teacher inquiry model conceptualized the relationship between teaching and inquiry. Analyses revealed that teachers' conceptions cast inquiry overall as a tight fit with teaching in three ways: by fostering a focus on students, by generating metacognitive knowledge about inquiry as a useful classroom process, and by deepening teacher knowledge about ways to respond thoughtfully to diagnosed student need. Analyses suggest program model elements may have seeded these conceptions.

Bower-Phipps, L., Klecka, C.V.S., and A.L. Sature (2016). Developing mentors: An analysis of shared mentoring practices. *The New Educator*, *12*(3): 289-308.

>Understanding how experienced teachers share and articulate effective mentoring practices can guide efforts to prepare quality mentors. This qualitative study focused on mentoring practices within a teacher-designed student-teaching program conceptualized while the mentor teachers within the program were students in a graduate-level mentoring course and implemented upon the mentors' completion of their graduate studies. Data sources included interviews and field notes from meetings with mentors and student teachers. The results detail specific mentoring practices: explicit instruction through scaffolding, developing the whole teacher, student-teacher-directed learning, fostering student teachers' individual practice, explicit mentoring of one another, and reflecting on mentoring. These practices were enabled by program structures such as mentor meetings, an online forum, and mentors' observation of all student teachers in the program.

Bryant, C.L., Maarouf, S., Burcham, J., and D. Greer (2016). The examination of a teacher candidate assessment rubric: A confirmatory factor analysis. *Teaching and Teacher Education*, *57*: 79-96.

>This article examines the review and revision process of the Model of Appropriate Practice (MAP), a locally developed pre-service teacher candidate assessment rubric based on Danielson's Framework for Teaching. The purpose was to confirm the quality of the rubric. As such, factor analysis was used to examine internal consistency and construct validity. The analysis yielded a 16-item rubric that showed strong estimates of reliability and validity across four teaching domains-planning and preparation, the classroom environment, instruction, and professional responsibilities. The importance of this process for improving teaching and teacher preparation is discussed.

Burbank, M.D., Ramirez, L.A., and A.J. Bates (2016). The impact of critically reflective teaching: A continuum of rhetoric. *Action in Teacher Education*, *38*(2): 104-119.

> This qualitative case study explored teaching approaches designed to develop critically reflective thinking (CRT) for preservice teachers in an urban, secondary teacher preparation program. Despite concerted use of CRT within course lessons, online discussions, and case studies, participants demonstrated varying degrees in their understanding of diversity and how they will respond in their teaching practices. Findings speak to the critical importance for teacher preparation that acknowledges conceptual readiness and receptivity among preservice teachers when challenging beliefs regarding diversity using critically reflective pedagogy. Findings will inform other teacher educators in the development of pedagogy and the tools for supporting critically reflective thinking, problem solving, and decision making in urban schools.

Burns, R.W. and B. Badiali (2016). Unearthing the complexities of clinical pedagogy in supervision: Identifying the pedagogical skills of supervisors. *Action in Teacher Education*, *38*(2): 156-174.

> Instructional supervision is a highly complex endeavor as supervisors work to enhance teacher, teacher candidate, and school effectiveness. The process of learning to supervise well can be daunting and difficult. Recent research on teaching has focused on enhancing teachers' ability to notice or observe aspects of teaching and student learning. The ability to assist teacher candidates to "notice" and observe is equally important when supervising them. This qualitative case study builds upon the research on teaching and on supervision. It illustrates that "noticing" is one of a constellation of pedagogical skills supervisors use to support the learning of others. In addition, the authors identify six other pedagogical skills including ignoring, marking, intervening, pointing, unpacking, and processing. Further defining these skills is useful for understanding the intricacies of clinical pedagogy in instructional supervision. The results of this study suggest that supervision in clinically rich contexts is a pedagogical or teaching function which extends beyond traditional conceptions of observation and feedback.

Choi, E., Gaines, R.E., Park, J.H., Williams, K.M., Schallert, D.L., Yu, L.-T., and J. Lee (2016). Small stories in online classroom discussion as resources for preservice teachers' making sense of becoming a bilingual educator. *Teaching and Teacher Education*, *58*: 1-16.

> This paper examines the occurrence and role of personal and professional stories, called small stories or narratives-in-interaction, shared among seven bilingual preservice teachers in nine online classroom discussions in a teacher preparation course. Grounded in qualitative and discourse analytic methods, findings indicated that narratives-in-interaction helped the participants make sense of becoming bilingual educators. Small stories acted to connect academic knowledge to teaching experiences, inviting diverse aspects of the participants' teaching self across time and personal and professional lives. Affordances of the online platform encouraged the use of small stories as a social practice for professional development as bilingual educators.

Cochran-Smith, M., Ell, F., Grudnoff, L., Haigh, M., Hill, M., and L. Ludlow (2016). Initial teacher education: What does it take to put equity at the center? *Teaching and Teacher Education*, *57*: 67-78.

> This article addresses the question: What would it take to put equity front and center in initial teacher education? Drawing on research and innovative programming, the authors argue there are four essential tasks: conceptualizing educational inequality and the role of teacher education in challenging inequality; defining practice for equity; creating curricula and structures that are equity-centered and tailored to local patterns of inequality; and, engaging in research for local improvement and theory building about the conditions that support candidates' equity practice. The article conceptualizes each of these tasks and illustrates how they have been addressed in one context.

Colwell, J. (2016). Examining preservice teachers' beliefs about disciplinary literacy in history through a blog project. *Action in Teacher Education*, *38*(1): 34-48.

> This qualitative case study explored preservice teachers' (PSTs) beliefs about disciplinary literacy as they engaged in a blog project with middle-school students to discuss historical texts. Twenty-eight PSTs, enrolled in a semester-long social studies methods course and participating in the blog project as a course assignment, constituted the case study. Data were collected through semistructured and informal interviews, classroom observations, questionnaires, audio/video recordings, and blog postings and analyzed using a constant comparative analysis. Emergent successive themes focused on positive PST perspectives about disciplinary literacy, the impact of practice on beliefs about disciplinary literacy, and the influence of continued blog writing on beliefs. Findings indicated how extended experiences working with middle-school students in a low-risk blog setting may promote positive beliefs about using disciplinary literacy in instruction, but those beliefs may be malleable as PSTs experience the literacy needs of struggling readers.

Dugas, D. (2016). The ineffectiveness of "effective" management strategies: First-year teachers, behavior management, and identity. *Action in Teacher Education*, *38*(1): 18-33.

> This article presents a research project that challenges the skills-based approach to classroom management in teacher education, particularly in the domain of responding to student misbehaviors. In 90-minute narrative-based interviews, 16 first-year Chicago Public School (CPS) teachers were prompted for narratives of their experiences responding to student misbehaviors. A thematic analysis of these interviews using a grounded theory methodology revealed three ways in which identity affected teachers' student behavior management decisions: (1) their desire to be seen as "a certain kind of teacher" by their students, (2) their desire to perceive themselves as a certain kind of person and teacher, and (3) identity concerns superseding effectiveness in teachers' selection of interventions. Implications of these findings are discussed. An experiential approach to identity development in teacher education is endorsed as a corrective to the predominantly skills-based approach to classroom management. An outline of a more coherent model of teacher identity is presented that may lend support and direction to this identity-based instruction and to future research in teacher identity.

Dutro, E. and A. Cartun (2016). Cut to the core practices: Toward visceral disruptions of binaries in PRACTICE-based teacher education. *Teaching and Teacher Education*, *58*: 119-128.

> Situated in the field's burgeoning attention to identifying and specifying "core practices" of teaching and drawing on data from a study of a writing methods course in a US teacher preparation program, this article draws on poststructuralist discourse and affect theories to show how attending to the affective dimensions of practice was crucial to "un-naming" discourses of Control and Failure in one preservice teacher's writing lesson. The authors argue that binaries within metaphors of practice(s) must be continually troubled to ensure that children's racialized, classed, and gendered positioning in schools is centered within practice-based teacher preparation.

Farrell, F. (2016). "Why all of a sudden do we need to teach fundamental British values?" A critical investigation of religious education student teacher positioning within a policy discourse of discipline and control. *Journal of Education for Teaching*, *42*(3): 280-297.

> This paper presents a critical investigation of a group of 11 religious education (RE) student teachers' views of the promotion of fundamental British values (FBV) undertaken in 2015. Using qualitative methods, data were collected in two semi-structured group interviews. Drawing from the perspectives of Foucauldian methodology and critical theory, this paper examines the extent to which student teachers were able to align the FBV discourse with their own personal and professional positioning. Findings demonstrate little consensus about what constitutes Britishness. There is evidence of dissonance in the student teachers' views that FBV sends out contradictory messages. The student teachers are committed to the development of learners'

moral imaginations, but are concerned by the capacity of FBV to alienate learners and its incompatibility with the pluralism of RE. The paper argues that it is through the development of teacher subjectivity in the alternative discourses of critical RE and research that practitioners will be able to make adjustments that can accommodate and re-appropriate the demands of policy.

Gelfuso, A. (2016). A framework for facilitating video-mediated reflection: Supporting preservice teachers as they create "warranted assertabilities" about literacy teaching and learning. *Teaching and Teacher Education*, *58*: 68-79.

> Reflection is a widely used pedagogy in teacher education. Although there is consensus that reflection is important for preservice teacher learning, the large corpus of empirical literature on reflection seems not to agree on what reflection is or how to support preservice teachers as they reflect. This study examined the moves made by a teacher educator as she facilitated video-mediated reflection with 15 preservice teachers. The findings describe those moves and how they helped the preservice teachers to create "warranted assertabilities" about literacy teaching and learning. A framework for facilitating reflection is offered.

Glock, S. (2016). Stop talking out of turn: The influence of students' gender and ethnicity on preservice teachers' intervention strategies for student misbehavior. *Teaching and Teacher Education*, *56*: 106-114.

> Study 1 identified destruction, aggression, and talking out of turn as student misbehaviors that 101 German preservice teachers consistently perceived as disruptive and needing intervention. In Study 2, 140 German preservice teachers were presented with a description of a student who talked out of turn. The gender and ethnicity (ethnic majority vs. minority) of the student were systematically varied. The intervention strategies that the preservice teachers chose exhibited stereotypical gender and ethnic biases. Male and ethnic minority students received more and also harsher interventions. Results are discussed in terms of their practical implications for teacher education programs.

Gutiérrez-Moret, M., Ibáñez-Martinez, R., Aguilar-Moya, R., and A. Vidal-Infer (2016). Assessment of emotional intelligence in a sample of prospective secondary education teachers. *Journal of Education for Teaching*, *42*(2): 123-134.

> In the past few years, skills related to emotional intelligence (EI) have acquired special relevance in the educational domain. This study assesses EI in a sample of 155 students of 5 different specialities of a Master's degree in Teacher Training for Secondary Education. Data collection was conducted through the administration of the Trait Meta Mood Scale-24 (TMMS-24) and the Mayer, Salovey & Caruso Emotional Intelligence Test (MSCEIT). Results show adequate levels of EI, especially in the strategic area, as well as some speciality-based differences among students. There is a need to develop specific training geared towards the development of emotional skills in the Master's in Secondary Education capacitation programmes according to the trainee's background.

Hambacher, E., Acosta, M.M., Bondy, E., D.D. Ross (2016). Elementary preservice teachers as warm demanders in an African American school. *The Urban Review*, *48*(2): 175-197.

> The literature related to warm demanding describes teachers who balance care and authority to create a learning environment that supports a culture of achievement for African American students. Embedded in this stance is sociopolitical consciousness that explicitly links teachers' care and authority with a larger social justice agenda. Drawing on interviews and online course assignments, we describe two preservice teachers' conceptions and enactments of warm demanding in full-time elementary school internships in an African American elementary school. Findings reveal that although the preservice teachers communicated similar commitments to warm demanding, they enacted the stance differently, suggesting that while warm demanders share similar commitments, their practice may vary. The two cases highlight the promise of teacher education courses and field experiences to be structured in ways that promote the

development of teacher aptitudes for strengthening equity and excellence in the education of an historically marginalized population of students.

Hamilton, E.R. (2016). Picture this: Multimodal representations of prospective teachers' metaphors about teachers and teaching. *Teaching and Teacher Education*, *55*: 33-44.

Metaphors are often used to help prospective teachers' articulate ideas and knowledge about teachers and teaching. This article reports the results of a study focused on a multimodal project completed by prospective teachers (N = 52) for the express purpose of identifying, capturing, displaying, and articulating their metaphorical definition(s) of teachers and teaching. Findings suggest that multimodality offered varied and nuanced ways for participants to represent and share metaphors. Findings also suggest that offering prospective teachers with opportunities to consider and articulate metaphorical ideas through multimodal means may further contribute to their development as they learn to teach.

Hebard, H. (2016). Finding possibility in pitfalls: The role of permeable methods pedagogy in preservice teacher learning. *Teachers College Record*, *118*(7): 1-46.

Background/context: Tensions between university-based teacher preparation courses and field placements have long been identified as an obstacle to novices' uptake of promising instructional practices. This tension is particularly salient for writing instruction, which continues to receive inadequate attention in K–12 classrooms. More scholarship is needed to develop a theory and practice of methods education that accounts for these tensions.

Purpose: This study investigated how opportunities to learn to teach writing in preservice preparation mediated teacher candidates' learning. The investigation's aim was to add to our knowledge of how teachers learn and the factors that impact this learning to offer implications for improving teacher education.

Participants and settings: Participants included literacy methods course instructors from two post-baccalaureate, university-based, K–8 teacher certification programs and participating candidates enrolled in these courses (N = 20). Settings included methods course meetings and participating candidates' field placements.

Research Design: This comparative case study examined opportunities to learn and preservice teachers' uptake of pedagogical tools across two programs. A cultural–historical theoretical lens helped to identify consequential differences in the nature of activity in preservice teachers' methods courses and field placement experiences. Data included instructor interviews, methods course observations, teacher candidate focus groups, and field placement observations. Patterns of field and course activity in each program were identified and linked to patterns of appropriation within and across the two cohorts.

Findings: In one program, methods course activity included opportunities to make sense of the approaches to teaching writing that teacher candidates encountered across past and current experiences. The instructor leveraged points of tension and alignment across settings, prompting teacher candidates to consider affordances and variations of pedagogical tools for particular contexts and goals. This permeable setting supported candidates to develop habits of thinking about pedagogical tools, habits that facilitated uptake of integrated instructional frameworks. In the other program, methods activity focused almost exclusively on the tools and tasks presented in that setting. This circumscribed approach did not support sense-making across settings, which was reflected in the fragmented nature of teacher candidates' pedagogical tool uptake.

Conclusions: Findings challenge the notion that contradictions in teacher education are necessarily problematic, suggesting instead that they might be leveraged as entry points for sense-making. In addition, permeability is identified as a useful design principle for supporting learning across settings. Finally, a framework of pedagogical tools for subject-matter teaching may provide novices with a strong starting point for teaching and a scaffold for further learning.

Hughes-McDonnell, F.J. (2016). Looking at learning as preparation for teaching. *The New Educator*, *12*(3): 269-288.

>One of the more heated and consequential debates in teacher education today concerns the instructional methods used in preparation programs and the knowledge and skills that teacher candidates should acquire. In this study, I examine looking at learning as a pedagogical approach to transition teacher candidates from the technical conceptions of teaching that they bring to the field toward a conception that more closely aligns with the research on how people learn for understanding (National Research Council 2000, 2005). Data are taken from responses given by teacher candidates to a writing prompt administered at the course outset and field reports they submitted following field assignments that required them to detail moments of learning as they presented volunteer learners with materials they selected to spark their curiosity and elicit exploration. The approach is an application of Duckworth's critical exploration methodology (2006) in the field of teacher education and responds to the call of leaders in the field of teacher education to articulate a "pedagogy of teacher education" that is grounded in theory (Grossman, 2005) and reflects the nature of teaching for understanding itself (Loughran, 2006).

Jett, C.C. and S.B. Cross (2016). Teaching about diversity in Black and White: Reflections and recommendations from two teacher educators. *The New Educator*, *12*(2): 131-146.

>In this article, two teacher educators reflect on their experiences teaching a diversity course for preservice middle-school teachers. The first author is an African American male teacher educator, and the second author is a White female teacher educator. While the authors bring distinct experiences, backgrounds, and epistemologies to this work, both seek to prepare preservice teachers with the skills and dispositions needed to meet the needs of culturally diverse students. Including their narratives in their own words, the authors share their experiences teaching this course and make recommendations for those doing this work in their respective spaces.

Jiménez, J.E. and I. O'Shanahan (2016). Effects of web-based training on Spanish pre-service and in-service teacher knowledge and implicit beliefs on learning to read. *Teaching and Teacher Education*, *55*: 175-187.

>The main objective of this study was to analyze the effects of web-based training on Spanish pre-service and in-service teacher knowledge and implicit beliefs on learning to read. A sample of pre-service teachers and in-service teachers from Mexico, Guatemala, Ecuador and Spain participated in the online course. Findings suggest that teachers may improve their knowledge of phonemic awareness, systematic phonics instruction, fluency, vocabulary, strategies for comprehension as necessary components of quality reading instruction. Upon completion of the training, effects were also found on the teachers' implicit beliefs. Finally, positive ratings were received by both the pre-service and in-service teachers.

Kaub, K., Karbach, J., Spinath, F.M., and R. Brünken (2016). Person-job fit in the field of teacher education – An analysis of vocational interests and requirements among novice and professional science and language teachers. *Teaching and Teacher Education*, *55*: 217-227.

>The article analyzes vocational interests and requirements of beginner (N = 149), advanced (N = 45), and professional (N = 72) teachers in math/science and arts/language. Referring to Hollands' (1997) model, we calculated teachers' person-job fit by two different congruence indices representing participants' fit to university teacher training and their fit to teacher profession. The results show differences in vocational interests, person-job fit, and profile differentiation as a function of teaching domain (math/science, arts/language) and teaching expertise (novice, professional teachers). Especially arts/language teachers, as well as, expert groups show high fit to teaching as a primarily social environment.

Kim, Y. and R.E. Silver (2016). Provoking reflective thinking in post observation conversations. *Journal of Teacher Education*, *67*(3): 203-219.

> We present a micro-analysis of post observation conversations between classroom teachers and mentors. Using the approach of conversation analysis, we show how the sequential organization of an episode (i.e., who initiates the interaction, question format used by mentors) could potentially serve to provoke or hinder teacher reflection. Our analysis reveals the different stances adopted by mentor and teacher during potentially discomfiting episodes, the relationship between the structure of initial questions, and the impact of question types on elicited teacher responses/reflections. Implications for handling this type of interaction for more effective professional development collaborations are discussed.

Klein, E.J., Taylor, M., Onore, C., Strom, K., and L. Abrams (2016). Exploring inquiry in the third space: Case studies of a year in an urban teacher-residency program. *The New Educator*, *12*(3): 243-268.

> Using case studies, we describe what happens from novice to apprentice when preservice teachers learn to teach in an urban teacher-residency (UTR) program with a focus on inquiry. Our UTR operates within a "third space" in teacher education, seeking to realign traditional power relationships and to create an alternate arena where the roles of the university, school, teacher candidate, and community can be reimagined. This third space encourages preservice teachers to be inquirers themselves in order for them to support their students as inquirers.

Körkkö, M., Kyrö-Ämmälä, O., and T. Turunen (2016). Professional development through reflection in teacher education. *Teaching and Teacher Education*, *55*: 198-206.

> This article investigates primary school student teachers' practicum-related reflections. The data consists of the portfolio writings of 13 students. A thematic analysis approach was used to investigate the content and level of students' reflection and how it contributed to their practical theory and professional development. The results show that practical theories were developed throughout the education programme. Students' reflections gradually broadened and deepened but remained primarily descriptive. Reflection, feedback and specific issues concerning each practicum promoted the development of practical theories. These results suggest that supporting student teachers' reflective skills can impact positively on their professional development.

Kotaman, H. (2016). Impact of religion on Turkish prospective early childhood teachers' judgments of fact. *Journal of Education for Teaching*, *42*(2): 163-172.

> The purpose of this study was to examine the impact of religion on prospective early childhood teachers' judgments of fact and reasoning. Six hundred and sixteen prospective early childhood teachers from seven different cities and universities in Turkey participated in the study. Participants read the religious story of "King Solomon and the Ant" and responded to the following questions: (1) Can Solomon converse with ants? (2) If yes, why, or no, why not? Please explain your answer with one sentence. Findings revealed that 520 of the participants (84%) responded to the first question affirmatively and 96 (16%) of the participants responded negatively. Among positive responders, 494 (80%) provided religious reasoning, while 83 (13.5%) laid out natural reasoning; 29 (4.7%) resorted to literary reasoning; and 10 (1.6%) offered uninformative explanations for their responses. Analysis revealed that participants? responses did not differ by their class level at the university. Recommendations are provided for the relevance of these findings for teacher education.

Krieg, J. M., Theobald, R., and D. Goldhaber (2016). A foot in the door: Exploring the role of student teaching assignments in teachers' initial job placements. *Educational Evaluation and Policy Analysis*, *38*(2): 364-388.

> We use data from Washington State to examine two stages of the teacher pipeline: the placement of prospective teachers into student teaching assignments and the hiring of prospective teachers into their first teaching positions. We find that prospective teachers are likely

to complete their student teaching near their college and hometowns but that prospective teachers' student teaching positions are much more predictive of their first teaching positions than their hometowns. This suggests that student teaching assignments may contribute to the "draw of home" in new teacher hiring. We also find that more qualified prospective teachers tend to student teach in more advantaged districts, suggesting that patterns in student teaching assignments may contribute to the inequitable distribution of teacher quality.

Lampert, J., Burnett, B., and S. Lebhers (2016). "More like the kids than the other teachers": One working-class pre-service teacher's experiences in a middle-class profession. *Teaching and Teacher Education*, *58*: 35-42.
> While teaching is largely a White, middle-class profession, some teachers, including White teachers, come from low socio-economic backgrounds. This paper examines how one working-class pre-service teacher in Australia experiences studying in a predominantly middle-class teacher-education program. Drawing on the work of Bourdieu, this paper seeks to explore what we can learn from the reflections of a female pre-service teacher who is a member of this much smaller group of working-class teachers and who brings to her teaching the habitus and life history that aligns with many of her students and the low socio-economic communities in which she teaches.

Langdon, F.J., Alexander, P.A., Farquhar, S., Tesar, M., Courtney, M.G.R., and M. Palmer (2016). Induction and mentoring in early childhood educational organizations: Embracing the complexity of teacher learning in contexts. *Teaching and Teacher Education*, *57*: 150-160.
> This mixed-method study looked at perceptions of induction and mentoring among New Zealand early childhood educators. Specifically, 213 respondents drawn from five regions representing urban, rural and differing socioeconomic levels, school organizations, and professional roles completed a 19-item psychometrically sound survey. There were significant differences in responses for leaders/mentors in contrast to mentees or teaching staff. Based on quantitative outcomes, two focus groups of school leaders/mentors and mentees were convened. Qualitative analysis of the transcripts revealed several important themes that served to amplify or extended the survey results. Implications of the quantitative and qualitative results are overviewed.

Larson, K.E. (2016). Classroom management training for teachers in urban environments serving predominately African American students: A review of the literature. *The Urban Review*, *48*(1): 51-72.
> The purpose of this paper was to review the literature in terms of professional development activities that researchers have enlisted to reduce student problem behaviors and improve classroom management competencies among teachers who work in urban environments serving predominately African American students. First, the author conducted a systematic literature review to collect articles that studied trainings intended to reduce student problem behaviors and improve classroom management competencies. Next, the author summarized the literature in terms of types of trainings, populations, designs, measures, intended outcomes, and results. Based on themes found in the literature, the author discussed implications and suggestions for future research.

Lau, S.M.C. (2016). Language, identity, and emotionality: Exploring the potential of language portraits in preparing teachers for diverse learners. *The New Educator*, *12*(2): 147-170.
> The present study, framed from a critical and transformative approach to teacher education, aims to investigate whether language portraits (Prasad, 2010)--the mapping of one's language and cultural make-up on a body template--can help improve student teachers' self-understanding about language and identities and can foster critical reflection regarding their attitudes towards linguistic diversity. This study looks particularly at how emotional engagement in autobiographical portraits and narratives of language experiences and practices could potentially facilitate personal

interrogation of social assumptions and open up possibilities for greater intellectual examination of the sociopolitical dimensions of second-language teaching and learning.

Lazar, A. and S. Sharma (2016). "Now I look at all the kids differently": Cracking teacher candidates' assumptions about school achievement in urban communities. *Action in Teacher Education*, *38*(2): 120-136.

This mixed-methods study explores the impact of teacher preparation coursework on 141 teacher candidates' understandings about educational equality, school achievement, and meritocracy. Framed by pedagogies of discomfort, the program included readings, discussions, simulations, films, and direct work with emergent bilingual students. Findings from an analysis of surveys, interviews, and class discussions indicate that the program (1) complicated candidates' understandings of school achievement and meritocracy in urban, underserved communities and (2) prompted participants to see students and themselves differently. These findings inform new pathways for enhancing candidates' ability to critically understand school achievement within complex systems of systemic advantage and disadvantage.

Leavy, A.M. and M. Hourigan (2016). Using lesson study to support knowledge development in initial teacher education: Insights from early number classrooms. *Teaching and Teacher Education*, *57*: 161-175.

This paper describes Lesson Study research with 25 pre-service primary teachers. We focus on pedagogical content knowledge (PCK) development as participants design, teach and reflect upon early number lessons. Engaging in Lesson Study promoted mathematics PCK development, notably in Knowledge of Content and Students (KCS) and Knowledge of Content and Teaching (KCT) subdomains. Reflecting on classroom teaching facilitated growth across both knowledge subdomains and resulted in highly integrated and robust pedagogical understandings that transferred beyond the study context. This development of early number PCK is outlined and the features of LS that make it effective in initial teacher education identified.

Lee, S. and D.L. Schallert (2016). Becoming a teacher: Coordinating past, present, and future selves with perspectival understandings about teaching. *Teaching and Teacher Education*, *56*: 72-83.

A longitudinal study is presented of how students preparing to become teachers conceptualized teaching and developed their identities as teachers. Findings were that contextualized momentary switchings between student and teacher perspectives accompanied participants' understandings about teaching and their negotiation of the process of becoming a teacher. Dynamic processes involved in constructing conceptions of teaching and self-as-a-teacher unfolded across three semesters, culminating in a more professional identity at program's end. The study contributes to teacher preparation research by making connections among aspects of professional development and suggesting a model of learning to teach, grounded in participants' situated perspectives on teaching.

Lui, A.M. and S.M. Bonner (2016). Preservice and inservice teachers' knowledge, beliefs, and instructional planning in primary school mathematics. *Teaching and Teacher Education*, *56*: 1-13.

We studied relationships between mathematical knowledge, beliefs about teaching and learning, and instructional planning. We contrasted beliefs, mathematical knowledge, and skills of preservice teachers (n = 47) with those of inservice teachers (n = 31) at the primary school level. For both groups, participants were generally more constructivist than traditional in beliefs, and showed evidence of low conceptual knowledge in mathematics. Multiple regression analyses indicated different relationships between conceptual knowledge and constructivist beliefs for inservice versus preservice teachers. Conceptual knowledge played a strong role in instructional planning in mathematics. Implications for future research and teacher education are discussed based on these findings.

Matias, C.E. and J. Mackey (2016). Breakin' down whiteness in antiracist teaching: Introducing critical whiteness pedagogy. *The Urban Review*, *48*(1): 32-50.

> Because of the changing nature of race the role of antiracist teaching is a forever-evolving process. Acknowledging that the majority of the U.S. teaching force, from K-12 to teacher education in institutions of higher education, are white middle-class females, it becomes imperative to unveil pedagogical applications of critical whiteness studies. Unwillingness to do so maintains the recycled nature of the hegemonic whiteness that dominates the field of education. This reflective paper examines the implemented pedagogies of a teacher education diversity course which begin to break down the whiteness ideology embedded in teacher candidates (i.e., pre-service teachers). Although the course's application of critical whiteness studies was in no way complete, it framed a pedagogical strategy for self-interrogation of whiteness, one that can be implemented in other teacher education courses across the nation. Adding to the existing field of research, this paper provides concrete teaching strategies about how to employ critical whiteness studies in teacher education, and examines the implications of such pedagogies in relation to the roles of racial justice and antiracist teaching. By including feedback from teacher candidates themselves, this paper demonstrates how effective the pedagogies were in preparing a majority of white female teacher candidates for urban teaching.

Maylor, U. (2016). "I'd worry about how to teach it": British values in English classrooms. *Journal of Education for Teaching*, *42*(3): 314-328.

> What is meant by fundamental British values? How are they constructed and can they be taught in schools? In trying to address these questions, this paper revisits a small-scale research study commissioned by the UK's previous New Labour government. The research was concerned to understand the extent to which schools delivered a diverse curriculum (reflecting the composition of Britain as an ethnically diverse society) as well as teacher and student conceptions of British values and contentions of shared British identities which could be explored in schools as part of the secondary citizenship curriculum. Drawing on interviews with teachers and head teachers in six case study schools across England, this paper examines school and government conceptions of shared "British" values. It explores how current government promotion of British values is embedded in sociopolitical historical contexts in Britain. Using social construction theory, the paper aims to challenge conceptions of British values being shared by teachers. The paper examines the implications of this for initial teacher education given that qualifying teachers standards require teachers not to undermine British values, yet some teachers do not buy into contentions of British values, and consequently worry about how to teach them. The teacher discourses highlighted also present challenges for teacher education in developing teacher understanding and practice, especially where student teachers bring uninformed views about particular ethnic groups to the classroom.

McCully, A. and L. Clarke (2016). A place for fundamental (British) values in teacher education in Northern Ireland? *Journal of Education for Teaching*, *42*(3): 354-368.

> This paper examines the distinctive locus of teacher education in Northern Ireland (NI) in respect of Fundamental British Values (FBV). It is written from the perspective of teacher education tutors in a PGCE programme that explicitly subscribes to pursuing the Shared Future agenda as outlined by NI Government policy in 2005. First, it establishes the inappropriateness of pursuing an FBV agenda in NI where the historical and contemporary context has been characterised by division expressed through opposing British and Irish identities; and, emerging from conflict where future political progress requires greater accommodation between these two often hostile positions. Second, using data from a previous Teaching and Learning Research Programme study (2005) on Values in Teacher Education as an indicator of student teacher social and political attitudes, it draws on later NI census (2011) and Life and Times Survey data (2005 and 2008) to identify the challenges and opportunities facing teacher educators wishing to encourage a more nuanced awareness among student teachers as to how identity issues impact on

education. Finally, one teacher education initiative designed for this purpose is examined and its approaches offered as a means that Initial Teacher Education might contribute to producing teachers better equipped to contribute to a more accommodating society in NI in the future.

Mosley Wetzel, M., Roser, N.L., Hoffman, J.V., Antonio Martínez, R., and D. Price-Dennis (2016). "I couldn't have learned this any other way": Learning to teach literacy across concurrent practicum experiences. *Action in Teacher Education*, *38*(1): 70-85.

> The authors, a team of literacy teacher educators who are focused on extending our own understandings of preservice teacher (PST) learning, conducted a cross-case analysis of how PSTs learned to teach literacy in three concurrent practicum experiences. We draw on Grossman's framework of representations, decompositions, and approximations to describe and interpret what PSTs learned. Through a focus on one student, Deanna, the authors illustrate three findings: PSTs came to value the variety of forms of students' literacies that reflected their ages, language backgrounds, and cultures/identities; they came to understand that relationships are essential to teaching and learning, and building relationships requires "putting myself out there" as well as "getting to know you"; and coming to know about students' literacies in contexts in which students can talk, read, make images, and write from life allowed PSTs to co-construct a curriculum that followed the students' leads. The concurrence of practicum experience allowed for deepened reflections and understandings of literacy teaching. To extend Grossman's work, the authors suggest the importance of using artifacts of PSTs' own practices as representations in a cycle of reflection.

Mosvold, R. and R. Bjuland (2016). Positioning in identifying narratives of/about pre-service mathematics teachers in field practice. *Teaching and Teacher Education*, *58*: 90-98.

> Research on identity development in mathematics teacher education has only given limited attention to narrative processes like indexicality, local occasioning, positioning and categorisation. In this article, we investigate how two pre-service mathematics teachers position themselves, and how they are positioned by a mentor teacher in mentoring conversations. Focusing on how pre-service teachers are positioned by a mentor teacher adds to present research on narrative positioning among pre-service mathematics teachers, and we argue that an increased focus on reflexive and interactive positioning is useful for the further development of research on identifying narratives in mathematics teacher education.

Oslund, J.A. (2016). After the Elementary Mathematics Teacher Workshop: Stories of becoming complex instruction teachers. *The Elementary School Journal*, *116*(3): 437-458.

> Teacher educators worldwide have increasingly understood the importance of studying teacher identity. This article uses data from a narrative study of teacher learning from a mathematics professional development (PD) experience that were collected after the PD as teachers were integrating new ideas into their practices. Data were generated as teachers told stories of classroom lessons in which they used methods for teaching mathematics using groupwork, which were learned in the PD. The data are used to illustrate the ways learning and identity work happened in tandem for four teachers and the way classroom experiences after the PD influenced their understandings of PD ideas. The results have implications for research and practice on teacher professional development.

Paquette, K.R. and S.A. Rieg (2016). Stressors and coping strategies through the lens of early childhood/special education pre-service teachers. *Teaching and Teacher Education*, *57*: 51-58.

> This mixed-methods study was designed to identify stressors, describe coping strategies, and pinpoint ways in which university supervisors can assist Early Childhood/Special Education (ECSP) pre-service teachers while they perform student teaching responsibilities. In that vein, participants were asked to identify stressors they experienced while teaching in the classroom setting. These stressors included three main ideas of work overload, communication, and

classroom management and discipline. Participants were also asked to convey the coping strategies they used. Coping mechanisms were comprised of relationships, exercise, time management, and the ability to schedule "down time." Finally, respondents were asked to state ways in which university supervisors could better support them. Answers evolved around the two concepts of effective communication and reassurance. Looking through the lens of ECSP pre-service teachers provides valuable insight for program improvement, student teacher success, and classroom teacher longevity.

Parker, A., Bush, A., and D. Yendol-Hoppey (2016). Understanding teacher candidates' engagement with inquiry-based professional development: A continuum of responses and needs. *The New Educator*, *12*(3): 221-242.

Teacher educators recognize that teacher candidates must have authentic, scaffolded opportunities to transform knowledge into practice. This study explores teacher candidates' engagement with teacher inquiry as a method for supporting professional development. Findings suggest teacher candidates differ tremendously in their responses to the inquiry process, creating a continuum of proficiency. This study extends the literature by providing concrete examples of the variation in readiness, sophistication, and quality in teacher candidates' attempts to engage in teacher inquiry. Implications for teacher educators include the importance of providing differentiated support through structured, sequenced experiences that build an inquiry stance in teacher candidates.

Paulick, I., Groβschedl, J., Harms, U., and J. Möller (2016). Preservice teachers' professional knowledge and its relation to academic self-concept. *Journal of Teacher Education*, *67*(3): 173-182.

We investigated the factorial structure of preservice teachers' academic self-concept with regard to three domains of professional knowledge (content knowledge [CK], pedagogical content knowledge [PCK], and pedagogical/psychological knowledge [PPK]). We also analyzed the relation between preservice teachers' academic self-concept and their professional knowledge. The sample consisted of N = 631 German preservice secondary teachers in biology and physics. To analyze the factorial structure of the academic self-concept, we applied confirmatory factor analyses (CFAs) and compared different models of complexity. Results confirmed that preservice teachers' academic self-concept is empirically separable into CK, PCK, and PPK. Furthermore, the self-concept scales were positively related to the corresponding test scores in the professional knowledge domains. Our results revealed that preservice teachers' academic self-concept is differentiated at a very early state of teacher education and reflects CK, PCK, and PPK performance. Hence, self-concept measures seem to provide an alternative means to assess preservice teachers' professional knowledge in comparison with traditional performance measures.

Petchauer, E. (2016). Shall we overcome? Self-efficacy, teacher licensure exams, and African American preservice teachers. *The New Educator*, *12*(2): 171-190.

This article reports findings from a 3-year qualitative study exploring the experiences of African American preservice teachers as they prepared for the Praxis "basic skills" teacher-licensure exam, a gatekeeper to many teacher-education programs. Using the construct of self-efficacy, results illustrate how students assess their Praxis capabilities from (a) previous mastery or failure experiences with other standardized tests and classes from college to elementary school and (b) vicarious experiences from African American students, friends, and family members. The article provides recommendations to prepare students for preprofessional examinations such as Praxis that often limit the numbers of African American teachers eligible for certification.

Peterson, A. and B. Bentley (2016). Securitisation and/or Westernisation: Dominant discourses of Australian values and the implications for teacher education. *Journal of Education for Teaching*, *42*(2): 239-251.

Debates concerning the nature, purpose and importance of Australian values have resurfaced in Australia following the election of the Liberal-led Coalition Government in September 2013. Two dominant discourses on Australian values have emerged within recent government rhetoric and public policy, both of which have included a demand for changes to how Australian values are taught and encountered within Australian education and schooling. In our analysis, we suggest that the two dominant discourses, one focusing on securitisation and one on Westernisation, have to this point operated separately, but have both focused on narrow, fixed and forced understandings of Australian values. Exploring the key themes of these two discourses, some important issues for teacher educators are set out, including the need to mediate these discourses against research evidence which suggests the importance of holistic and co-operative pedagogical relationships based on trust and humility for effective values education. Though our analysis focuses on the Australian context, the arguments made are likely to be of interest elsewhere given current debates about national values in education across a range of jurisdictions.

Pfitzner-Eden, F. (2016). I feel less confident so I quit? Do true changes in teacher self-efficacy predict changes in preservice teachers' intention to quit their teaching degree? *Teaching and Teacher Education*, *55*: 240-254.

> This study explored how teacher self-efficacy (TSE) of two cohorts of preservice teachers (advanced and beginning) changes during coursework at university and during a practicum at school. Further, it determined if changes in TSE were related to changes in preservice teachers' intention to quit their degree. Changes in TSE differed between TSE dimensions, the two aspects of teacher preparation, and the two cohorts. Generally, increases in TSE during the practicum were associated with decreases in preservice teachers' intention to quit. Results are discussed with regard to future directions in research and practical implications for teacher educators.

Pulvermacher, Y. and A. Lefstein (2016). Narrative representations of practice: What and how can student teachers learn from them? *Teaching and Teacher Education*, *55*: 255-266.

> Representing practice as an object for joint scrutiny is critical for student teacher learning and the development of professional vision. This article examines narrative representations of practice in teaching methods workshops and their affordances and constraints for prospective teacher learning. Three workshops in an Israeli teacher education program were video-recorded and analyzed. Embedded narratives were the most prevalent form of representation, often serving to advance claims and counter-claims. An examination of 112 narrative episodes revealed three forms of mediation: non-exploration, explication and discussion. We conclude that designing for intentional mediation of embedded narratives might increase their utility for teacher education.

Reeves, T.D. and R.J. Lowenhaupt (2016). Teachers as leaders: Pre-service teachers' aspirations and motivations. *Teaching and Teacher Education*, *57*: 176-187.

> Teacher attrition is among the most salient problems facing education systems worldwide. Recent research has attempted to understand this phenomenon in light of teacher generational characteristics, finding that today's teachers often view teaching as a short-term endeavor, and desire influence beyond the classroom. This exploratory study attends to this issue in relation to US pre-service teachers. Findings indicate that, even before officially entering the classroom, many teachers expect to take on leadership roles—especially "hybrid" roles that keep them partly in the classroom. Based on findings presented here, we consider implications for teacher preparation and teacher career paths.

Reynolds, H.M., Wagle, A.T., Mahar, D., Yannuzzi, L., Tramonte, B., and J. King (2016). Changes in residents' self-efficacy beliefs in a clinically rich graduate teacher education program. *Action in Teacher Education*, *38*(2): 137-155.

Increasing the clinical preparation of teachers in the United States to meet greater rigor in K-12 education has become a goal of institutions of higher education, especially since the publication of the National Council for the Accreditation of Teacher Education Blue Ribbon Panel Report on Clinical Practice. Using a theoretical framework grounded in teacher self-efficacy, this article documents changes in perceptions of effectiveness in a cohort of preservice teachers over the course of a year-long clinically rich graduate-level residency program. Using the categories of the rubric that were being utilized for classroom observations, we surveyed residents about their perceptions of their own effectiveness in these areas prior to and at the conclusion of the residency program.

Romi, S., Salkovsky, M., and R. Lewis (2016). Reasons for aggressive classroom management and directions for change through teachers' professional development programmes. *Journal of Education for Teaching*, *42*(2): 173-187.
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> This investigation was designed to determine whether there are significant relationships between the reasons teachers provide for aggressive classroom management techniques and the type of professional education created to help them reduce their reliance on such techniques. The study reports data from a survey of 192 Australian teachers showing that teachers' gender and their school (primary or secondary) are related to rationales for teacher aggression. Teachers more accepting of the Attribution narrative as an explanation for teacher aggression are less likely to be supportive of gaining more knowledge about a misbehaving student. In contrast, those who more readily identify Efficacy as a reason for teacher aggression are more likely to gain more knowledge about a misbehaving student and about techniques that work with that student in other settings. Finally, teachers more accepting of the Attachment narrative did not exhibit a preference for any specific kind of support. Consequently, all types of PD activities might contribute to teachers who are seeking to feel close to students.

Ruohotie-Lyhty, M. and J. Moate (2016). Who and how? Preservice teachers as active agents developing professional identities. *Teaching and Teacher Education*, *55*: 318-327.
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> This study is part of an ongoing action research project with preservice class teachers in Finland. The study aims to better understand the forms agency takes in preservice teachers' professional identity development. Through the dialogical analysis of student assignments, this study outlines how student teachers are active within their own development and the way in which experiences are drawn on as preservice teachers exert their identity-agency. The results of this study provide a relational picture of identity development highlighting the way in which identity-agency is contextualized, potentially nourished by the relationships between self and other and dependent on experience.

Rutherford, G. (2016). Questioning special needs-ism: Supporting student teachers in troubling and transforming understandings of human worth. *Teaching and Teacher Education*, *56*: 127-137.
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> This paper is offered to spark discussion about teacher educators' contestation of 'special needs' ideology, to disrupt discriminatory thinking that diminishes educational opportunities for labeled students. Following discussion of the overarching purpose of education and evidence of the tenacity of special needs-ism, I explore multidisciplinary pedagogical tools that may facilitate engagement with student teachers, to trouble and transform hegemonic beliefs. These include notions of dysconsciousness, critical consciousness, threshold concepts, and pedagogies of discomfort, all of which highlight the role of emotion in realizing new understandings. Recognizing the inherent human worth of all students is considered fundamental in addressing educational inequities.

Salmon, D. and W. Gardiner (2016). The faculty research residency: A model for supporting teacher education curriculum renewal. *Action in Teacher Education*, *38*(1): 3-17.

The faculty research residency (FRR) model was launched in 2010, with the goal of transforming coursework to improve the preparation of teachers for high-need schools. The FRR model leveraged school-university partnerships and situated university faculty in high-need schools to conduct research related to the university courses they taught. This study investigated the outcomes of the FRR model for a 3-year period involving 16 research residency projects and 23 faculty members. Faculty research residents investigated a wide variety of teaching practices to contextualize their knowledge and better align their teacher education courses with the needs of students and teachers in high-need schools. Findings indicate that the FRR model shows promise as an innovative faculty development mechanism for colleges of education.

Shelton, S.A. and M.E. Barnes (2016). "Racism just isn't an issue anymore": Preservice teachers' resistances to the intersections of sexuality and race. *Teaching and Teacher Education*, *55*: 165-174.
> Through year-long focus group interviews with members of a secondary English Education cohort this paper considers both 1) participants' understandings of sexuality and race and 2) how participants' understandings of sexuality and race shaped their interactions with one another. Themes established through data analysis suggested that 1) participants maintained positioned racism as an historical issue that contrasted with the contemporaneity of LGBTQ issues; 2) participants resisted intersecting race and sexuality; 3) participants silenced Andy, the only queer student of color, when she argued for the intersectionality of race and sexuality.

Singer-Gabella, M., Stengel, B., Shahan, E., and Kim, M.-J. (2016). Learning to leverage student thinking: What novice approximations teach us about ambitious practice. *The Elementary School Journal*, *116*(3): 411-436.
> Central to ambitious teaching is a constellation of practices we have come to call "leveraging student thinking." In leveraging, teachers position students' understanding and reasoning as a central means to drive learning forward. While leveraging typically is described as a feature of mature practice, in this article we examine approximations of leveraging as enacted by elementary teachers who are just beginning their careers. In addition to providing an existence proof that novices can leverage when teaching elementary mathematics, the analysis surfaces and illustrates four pressure points—epistemic, academic, developmental, and managerial—that can short-circuit the development of novices' efforts. Our framing of these pressure points both spotlights the complex dynamics at play, and establishes an agenda for supporting the development of this practice: learning to leverage student thinking is a challenging and long-term endeavor, rather than a routine easily acquired.

Smith, H.J. (2016). Britishness as racist nativism: A case of the unnamed "other". *Journal of Education for Teaching*, *42*(3): 298-313.
> The construct of Britishness, as with nationalism elsewhere in the world, although amorphous and permeable over time, continues to be used by politicians and the media as a powerful exclusionary force. Moreover in England, fundamental British values (FBV), its most recent and official incarnation, now hold particular currency in education policy and regulatory mechanisms. This paper employs the concept of racist nativism, developed to explain the dialectic relationship between nativism and racism in America, to analyse both political constructions of Britishness with media portrayals of this and student-teachers' comprehension of FBV as an aspect of the Teacher standards in England. The underlying premise here is that understanding student-teachers' perceptions requires an understanding of the social context in which they are learning to teach. The paper explores relations between these; distinct differences between the manifestations of racist nativism in the sociopolitical context, compared to student-teachers' perceptions in a professional context highlight perturbing issues for critical teacher-educators. Furthermore, the two analyses support articulation of the operationalisation of racist nativism in a context outside of the specific racial context of America. As this is manifested in subtly but

importantly different ways than previously considered, the analysis also offers elaboration on the concept of racist nativism itself.

Tang, S.Y.F., Cheng, M.M.H., and A.K.Y. Wong (2016). The preparation of pre-service student teachers' competence to work in schools. *Journal of Education for Teaching*, *42*(2): 149-162.

> Competence to work in schools is an important dimension of professional competence, although it is often a neglected dimension of teacher development. This article reports a qualitative study that examined student teachers' learning experiences in initial teacher education (ITE) in relation to competence to work in schools. In-depth interviews were conducted with 12 student teachers on an undergraduate ITE programme in Hong Kong. The findings of the study show that competence to work in schools is characterised by student teachers' deep contextualised learning. In addition, it offers a deeper understanding of this competence in the ITE context by identifying its three facets, namely understanding of the micro-political realities of schools, social capital building and social strategies. The study provides insights for ITE and schools to support student teachers' development of their competence to work in schools, including the design of ITE curricula, ITE processes and co-curricular activities in undergraduate studies. Moreover, it suggests the importance of developing schools as growth-fostering and positive micro-political sites for ITE fieldwork and teacher induction.

Thornberg, R. and E. Oğuz (2016). Moral and citizenship educational goals in values education: A cross-cultural study of Swedish and Turkish student teachers' preferences. *Teaching and Teacher Education*, *55*: 110-121.

> The aim of the present study was to examine Swedish and Turkish student teachers' moral educational and citizenship educational goal preferences in values education. The participants were 198 Swedish and 190 Turkish student teachers. While Turkish student teachers seemed to be more morally committed and eclectic than Swedish student teachers, hypothesized gender differences could only be found in the Swedish sample. Whereas there was no difference in their commitment towards critical-progressive goals, Turkish student teachers expressed a stronger commitment to traditional-conservative goals than Swedish student teachers.

van Ingen, S., Alvarez McHatton, P., and E. Vomvoridi-Ivanovic (2016). How do preservice teachers understand the use of research to inform practice? Foundational knowledge for bridging the gap. *Action in Teacher Education*, *38*(2): 175-189.

> Despite widespread discourse about the need for teachers to utilize education research, little is known about how teachers learn to engage in this practice. How do preservice teachers understand the use of research to inform their teaching? Set within the context of a mathematics methods course, this study provides a detailed analysis of the written research implementation plans of 29 preservice teachers. The data were analyzed using the principles of grounded theory, and four themes were developed regarding preservice teacher ability to understand research, create an implementation plan, modify the plan, and evaluate the plan. The findings problematize the complex process of research implementation and indicate microskills that teacher educators can address when preparing novices to engage in the process of research utilization.

van Rijswijk, M., Akkerman, S.F., Schaap, H., and J. van Tartwijk (2016). Past perceptions and future expectations: Sensed dis/continuity at the start of teacher education. *Teaching and Teacher Education*, *58*: 99-108.

> Because of pressing issues such as teacher attrition, we explored differences in student teachers' expectations and perceptions as they entered teacher education. Thirty-five narrated self-concepts of student teachers in a post-graduate teacher education program were studied. From these we identified four types of past perceptions and four types of future expectations. Combinations of perceptions and expectations were found to be illustrative of three types of sensed dis/continuity in student teachers. The findings assemble into a framework that can be

beneficial for researchers and teacher educators in diagnosing dis/continuities in the self-concept and consequent expectations about further development as a teacher.

Wansink, B.G.-J., Akkerman, S., and T. Wubbels (2016). The Certainty Paradox of student history teachers: Balancing between historical facts and interpretation. *Teaching and Teacher Education*, *56*: 94-105.

> Teaching interpretational history is known to be challenging for history teachers. This study aimed at understanding how student teachers develop in terms of representing history epistemologically. 13 student teachers were interviewed drawing retrospective storylines. Student teachers reported more factual and less interpretational history teaching than they would have preferred, yet can be influenced in different epistemological directions by their work and learning environment. A prominent finding is that student teachers need to develop confidence in expertise before allowing the 'uncertainty' of interpretational history teaching, showing a 'Certainty Paradox'. A case for careful apprenticeship selection and epistemological reflection is made.

White, S. (2016). Teacher education research and education policy-makers: An Australian perspective. *Journal of Education for Teaching*, *42*(2): 252-264.

> As teacher educators, we want our research to be influential in contributing to educational policy and practice, but there remains little understanding about ways in which teacher educators might more productively engage with each other and policy-makers so as to maximise their research impact. Drawing on an empirical study and policy document analysis, this paper seeks to foster a generative "researcher-policy-maker dialogue" by understanding more about policy-makers' perspectives of what shapes their decision-making and the current role of research evidence in those decisions. Using a research utilisation theoretical framework and discourse analysis, data revealed various factors that served as barriers or enablers to using research in making education policy decisions. Results indicated that policy-makers largely position research as key to solving their policy problems. As such they sought better communication strategies to utilise research findings in a timely, free and publicly accessible, user-friendly manner. Overall, they called for a greater dialogue and engagement at all stages of the policy process and criticised what they perceived as a "fly in-fly out" research approach. Recommendations suggest new collaborative approaches and genres are needed for the teacher education research community to have a greater impact in influencing policy.

Winder, C. and C. Corter (2016). The influence of prior experiences on early childhood education students' anticipated work with families. *Teaching and Teacher Education*, *55*: 133-142.

> Early childhood educators (ECEs) are increasingly expected to work collaboratively. In order to best prepare pre-service ECEs for their work with families, faculty members need to understand the prior experience and beliefs students bring to their professional training. This cross sectional study examined the biographical experience and previous postsecondary education of 215 beginning and 217 soon to graduate ECE diploma students. We found that prior experience and education were related to students' ratings of parental knowledge and to their assessments of the importance and feasibility and their level of preparation to engage in family involvement activities.

Yuan, E.R. (2016). The dark side of mentoring on pre-service language teachers' identity formation. *Teaching and Teacher Education*, *55*: 188-197.

> This research explores the identity construction of two pre-service language teachers through their interactions with school mentors and university supervisors during their teaching practicum. Informed by self-discrepancy theory and possible-selves theory, the findings demonstrate how negative mentoring dismantled the student teachers' ideal identities (e.g., "a communicative teacher" and "an active learner") and created different ought (e.g., "a follower") and feared (e.g., "a controlling teacher") identities, which impinged on their professional learning and growth. This

study concludes with practical implications on how to promote the effectiveness of mentoring to facilitate pre-service teachers' learning to teach.

<u>Overarching framing from Percy Bates and Ebony Perouse-Harvey</u>

Our effort here is to present a historical context of special education and focus our discussion around preservice teacher education for both special and general educators. The articles chosen are not from journals typically included in the TeachingWorks Journal Club but we believe they will create context for our discussion. The article published by Brownell, M., Sindelar, P., Kiely, M., and Danielson, L., (2010) presents a thorough historical layout of policy, research and teacher education in special education. The article by Rock, ML., Spooner, F., Nagro, S., and Vasquez E., (2016) discusses current research in the area of special education teacher training/development. In this article, the discussion focuses on possible transformative models for special education teacher preparation. Taking into account our participants knowledge of preservice teacher education and content area training combined with our special education expertise, we present the following questions:

- *Rock et al. describe three salient challenges within special education: special educator workload, role ambiguity, and evaluation. What challenges do general educators face with respect to these issues? Which is/are most salient to general educators? Why?*

- *How can we infuse knowledge of special education into our general education programming?*
    - *What do our candidates need to know and be able to do?*
    - *Where in our program can we create opportunities for our candidates to learn how to best support students with disabilities?*

Abstract:
The authors trace changes in conceptions of special education teacher quality and preparation in response to developments in special education research, policy, and practice. This developmental arc is a backdrop for understanding contemporary special education practice and charting future directions for preparing special education teachers. Federal policy, and recent research on teaching and learning, and the response-to-intervention (RTI) movement require a shift in thinking about how to prepare quality special education teachers and the expertise they need to be effective. To function effectively in RTI and fulfill federal highly qualified teacher requirements, special education teachers must master an increasingly complex knowledge base and sophisticated repertoire of instructional practices. The authors contend that preservice preparation is inadequate for this purpose and that preparation for special education teaching should build upon an existing knowledge base and demonstrated competence in classroom practice.

Summary prepared by Ebony Perouse-Harvey

Background
Brownell, Sindelar, Kiely and Danielson present the historical context of policy (1950s-2000s), research, teacher education and Response to Intervention as a framework to support special and general educators in their work with students with disabilities. In their discussion of the transition of special education teacher preparation from "specialized, clinical preparation in residential facilities" to a profession that "lacks clear conceptual boundaries" (p. 358), these authors divide special education teacher preparation into three time periods, the categorical, noncategorical and integrated eras. They extend their discussion to include Response to Intervention as an approach to improving special educator teacher training.

Categorical Era
Political context. The first special education preparation programs grew out of residential facilities created under the tutelage of clinicians like Seguin, Gallaudet, and Itard. Laws requiring compulsory education for all children and the need to improve the quality of public education led to the transfer of teacher preparation from residential settings to teachers' colleges. The passage of the Education of Mentally Retarded Children Act of 1958 provided support to develop leadership preparation for special educators by colleges and universities; and the passage of the Deaf Act of 1961 signified the first time the federal government funded teacher preparation. Subsequent laws considerably increased funding levels.   By the early 1970s, the Bureau of Education for the Handicapped (BEH) provided considerable support to numerous teacher preparation programs across the country; most training focused on specific disability categories. States also provided teacher certification in specific disability categories.

The authors highlight an intersection between special education and the Civil Right Movement: The *Brown v. Board of Education (1954)* decision ruled "separate but equal" unconstitutional, opening the door for parents of students with disabilities to demand equal educational opportunities for their children. *Pennsylvania Association for Retarded Children v. Commonwealth of Pennsylvania (1972)*, established that no state could deny education to a child with a disability on the determination that he/she is uneducable or because the child is not toilet trained. In 1973, the passage of the Education for all Handicapped Children Act (EHA) ensured that students with disabilities had access to a free and appropriate public education that is specifically designed to meet their needs. This led to many students with special needs entering public schools. Many public schools were ill-prepared to meet the needs of a more diverse student body. Curricula were not designed for students who developed or performed

atypically. General educators often lacked the skills and experience necessary to adapt. This led to many special education students being referred for services in separate settings (e.g., smaller classes within the school) and increased the demands for trained special educators.

Research & teaching. One body of research saw disability as an organic disorder and examined how processing deficits could be remediated: If the impairment could be identified, then special educators could be trained to remediate the identified deficits (p. 360). The categorical approach to special education services were based on the assumption that effective special educators had a deep knowledge of the characteristics of specific disabilities, how to assess them and provide appropriate interventions. Diagnostic-prescriptive teaching assessed perceptual motor or psycholinguistic abilities and instructional plans were developed to remediate deficiencies or modify academic instruction to capitalize on strengths and avoid weaknesses. A parallel line of research developed in behavioral psychology. Behaviorists applied principles established in their work with animals to develop behavior modification and applied behavior analysis to assist students with emotional disabilities and cognitive impairments. Diagnostic-prescriptive teaching was abandoned when researchers failed to validate the above stated assumption underlying this method. Research in effective instruction and classroom management seemed more promising to researchers and behaviorists were joined by educational psychologists working within the process-product framework.

Noncategorical Era

Political context. During 1970s and 1980s, the categorical approach gave way to the noncategorical approach. Behaviorists and process-product researchers developed an expansive repertoire of effective strategies to be applied by teachers. These strategies were applicable to multiple disability classifications, answering the concerns of researchers who believed that it was unethical to separate children based narrowly on disability categories. At the same time, despite the federal government's substantial investment in special education, there continued to be a shortage of qualified teachers. This led states to move toward noncategorical or cross-categorical licensure that provided schools flexibility in hiring special educators. As a result, teachers were assigned students with various disabilities. A small body of research developed around the overlap of instructional needs that span multiple disabilities.

Research & teaching. Behavioral research of the 1970s became foundational to special education practice and teacher preparation during the noncategorial era. The idea that the impact of teacher practice could be observed and measured over time became the basis of curriculum-based measurement (CBM). CBM was similar to diagnostic-prescriptive teaching that both assessed and used data frequently but instead of using assessments to predict successful interventions, CBM was used to validate the effectiveness of interventions that were implemented. In short, CBM provided teachers the ability to test the effectiveness of their ideas. Another addition was the Direct Instruction (DI) Curriculum designed to help students that had difficulty reading regardless of disability or level of reading impairment. The DI curriculum prescribed specific teacher actions, this was done to increase the fidelity of the lessons. Teachers felt that this scripting minimized their decision-making and de-skilled their work. Diagnostic-prescriptive teaching provided a welcomed alternative: useful generic instructional and classroom management principles that made individual prescription unnecessary (p. 363).

Integrated Era

Political context. In the 1990s more students with disabilities were included in general education classrooms, but concern began to build over whether these settings successfully accommodated students with disabilities. Efforts to include more students with disabilities also highlighted the confusion of roles and responsibilities of general and special educators, prompting a new round of teacher education reform. Training of special and general educators together was built on the assumption that collaboration was necessary to success.

At the same time, a debate arose about the extent to which students with disabilities benefitted from inclusion in general education settings. One body of research revealed that separate class placements did not improve the outcomes for student with mental retardation, and another body of research revealed that resource rooms, which are considered separate placements, proved to be more effective than general education placements for students with learning disabilities (Carlberg & Kavale, 1980; Sindelar & Deno, 1978). These empirical findings were hotly debated making it difficult to draw broad, overarching conclusions about the effectiveness of separate class placements for all students with disabilities. As a result, the empirical argument was replaced with a moral and ethical argument. The desire to improve attitudes toward people with disabilities, combined with growing concerns about the overrepresentation of students of color in special education, tilited the consensus toward greater inclusion. By 1993, almost all states had adopted inclusive policies, necessitating further changes in special education teacher preparation.

Research & teaching. The belief that both general and special educators needed to be prepared differently became widespread and evidence began to support this belief. Researchers found general educators paid little attention to learning differences among individual students, did not want to adapt instruction and were unable to meet the academic needs, nor improve the achievement of students with disabilities (Fuchs and Fuchs, 1994; Kauffman 1993; Kavale and Forness, 2000). Special educators felt displaced in this new framework and did not have the skills necessary to effectively consult or collaborate (Baker and Zigmond, 1990; Zigmond and Baker, 1990; McIntosh, Vaughn, Schumm, Haager, and Lee, 1993). A new approach, integrated teacher preparation was based on the assumptions that an effective general educator should be knowledgeable about the curriculum and methods of classroom instruction, motivated to work with various students, able to differentiate instruction, and willing to collaborate, while special educators should be disposed to solving problems by gathering pertinent information and should be able to make decisions based on expertise. The purpose of integrated teacher preparation was to prepare general and special educators to collaborate with one another in more inclusive settings.

Reconceptualization of Special Education Preparation
Brownell, Sindelar, Kiely and Danielson call for a reconceptualization of special education teacher preparation. They highlight the finding that skilled teachers make a tremendous impact on student achievement (p. 366) but argue that schools face the reality of dwindling educational resources and support for public education, teacher shortages, and monetary resources to support reform. In addition, contemporary education reforms require most students with disabilities meet general education standards on high-stakes assessments. Another challenge that they identify is the overidentification of minority students for special education services and the degree to which students with disabilities are being educated effectively. Researchers and policy makers believe that lack of use of evidence-based practices is leading to misidentification and the possibility of inadequate instruction (p. 366).

The authors present a case for the use of Response to Intervention (RTI) as a framework to support special educator teacher training. RTI is a three-tiered approach intended to provide students with increasingly explicit, intensive and individually tailored instruction. In the first tier, general educators are expected to provide high-quality, evidence-based instruction and remediation to all students; in the second tier, special educators collaborate with general educators in "multidisciplinary planning" to meet the needs of students who struggled in tier I; in the third tier, special educators provide intensive and individualized instruction to support students who continue to struggle after receiving tier II supports (p. 369-372). This model implies certain necessary features of teacher preparation including general educator knowledge of content, evidence-based remedial practices, and curriculum based measurement; special educator knowledge of general education curriculum, reading, writing, mathematics, instructional interventions, assistive technology, and assessment for high-risk learners.

The authors highlight that many general educators are unprepared to deal with the diverse needs of students who "fail to thrive in response to good classroom instruction" (p. 372). At the same time, they

argue that special educators require support in developing content area, language, literacy, and numeracy expertise in order to provide effective Tier II and III interventions. In order for this to be comprehensive, the principles of the RTI movement need to be integrated into teacher licensure, education, and salaries. It must also be support through legislation, polices, and public funding. Brownell et al., highlight Rhode Island as a model for other states. Rhode Island created core principles to develop teaching standards for both general and special education teachers to support a systematic approach to teacher preparation. These principles guide licensure, state-mandated induction and mentoring, and relicensure for experienced teachers. Career ladders are also instituted to ensure both general and special educators acquire additional expertise needed for tiered intervention and to ensure that acquiring more advanced special education expertise is valued.

Abstract:
Contemporary challenges confronting special education teachers include, in part, workload, role ambiguity, evaluation, and shortages. Based on these and other challenges, the piece-meal fragmented approach to pre- and in-service training, which exists currently, needs to be replaced with 21st century models of special education teacher development that are seamless, technology enabled, comprehensive, cohesive, and career spanning. In this article, the authors briefly address persistent and unresolved challenges, identify contemporary change drivers, and discuss ways in which teacher education professionals could leverage the drivers to inform the development of 21st century models for special education teacher development aimed at improving outcomes for students with disabilities. Change drivers include the digital revolution, the diversity gap, the credibility factor, the demand for collective impact, and the culture of we. The authors conclude with a call to action.

Summary prepared by Ebony Perouse-Harvey

Background: Challenges of Special Education
In this piece, Rock et al., take a global view of special education and suggests methods to address the complexity of special educator training and professional development. They confront some of the most salient challenges that currently beset special education and present areas to consider as the special education community looks to create models of special education teacher training and development that meet the 21st century roles and responsibilities of special educators in the United States. They define special education as: "special education means specially designed instruction, related services, and supplementary aids and services that are provided to meet the unique needs of children and youth with disabilities to help them achieve an education benefit" (p. 98). The need to provide specialized instruction demands that educators collaborate and skillfully assess, plan, and deliver appropriate and effective interventions to a diverse population of students (i.e. language, disability category, grade level, ability level, etc.). The responsibility to execute this type of instruction carries "a host of other contemporary workforce challenges" (99), which include but are not limited to, teacher shortages, issues with evaluation, special educator role ambiguity and increased workload. Meeting the challenges of this contemporary environment requires initial and ongoing training throughout the career of the special educator. The authors address persistent challenges that continue to go unresolved in special education: teaching workload, role ambiguity, teacher evaluation and teacher shortage.

Special Education Teacher Workload
The authors explain that the tremendous amount of responsibilities given to special educators has made hiring and retention of special educators difficult. Many special educators report being dissatisfied with the breadth of their role and workplace conditions, which include:

- Having the "knowledge, skills, and dispositions" to efficaciously teach core academic subjects that are culturally and linguistically appropriate for their students;
- Having knowledge of federal, state, and local policy;
- Having knowledge of implementation of these polices;
- Employing evidenced-based practices (EBPs);
- Knowing how to effectively assess in order to assist in determining student eligibility for special education services;

- Writing individualized education plans (IEPs) that include goals and objectives that are specific to individual students;
- Conducting and support progress monitoring of students throughout the academic year;
- Consulting and collaborating with related service providers, general educators, administrators, families, local and state agencies;
- Staying up to date on evidenced-based practices, differentiation and assistive technology;
- Understanding how various disabilities are manifested in the school environment;
- Facilitating transition services for students that are exiting secondary school into work and/or collegiate environments.

In addition, special educators must also have to remain attentive to students on their caseloads, work within limited planning periods, complete due process compliance paperwork and attend related meetings (p. 99).

Special Education Teacher Role Ambiguity
Special educators teach in a variety of settings that range from special schools (that cater to only students with specific disabilities) to general education classrooms (which are considered the least restrictive environment). They also collaborate with general educators in a variety of models, such as, co-teaching, team teaching, and facilitation. Special educators also supervise para educators and provide direct instruction to students across a range of disabilities and grade levels in both academic and non-academic subjects.

Special Education Teacher Evaluation
Another issue presented by Rock et al. is the undue pressure that teacher evaluation places on special educators. In some states, standardized testing is weighted as much as 50% of teachers' yearly evaluations (W.D. Lewis & Young, 2013). These evaluations do not take into consideration that students with disabilities require specialized instruction as a result of lower academic performance in relation to their peers. Special educators often work with students that are homeless, have attendance problems, and experience challenges at home.

Special Education Teacher Shortage
Factors such as teacher evaluation and role ambiguity drive many special educators to leave the field and also prevent talented professionals from pursuing it in the first place (Baker et al., 2010), causing chronic special education teacher shortages in many rural and urban districts (Menlove, Garnes, & Salzberg, 2004). As a result, one million students with disabilities receive services from untrained or inadequately trained personnel, or do not receive services at all each year (T.A. Tyler & Brunner, 2014). Lack of effectively trained personnel negatively impacts school reform efforts and the implementation of instructional programs (McLesky & Bilingsley, 2008). Further, districts incur financial losses when teachers leave (Darling-Hammond, 2003). Although alternative teacher education programs exist, research on teacher effectiveness, student outcomes, teacher attrition, and cost-effectiveness has been mixed (Sindelar, Wasburn-Moses, Thomas, & Leko, 2014).

Theoretical Framing
In the face of these issues, Rock et al., suggest constructing teaching models that extend throughout the career span of special educators, from pre-service to in-service. They call for visionaries and researchers to "construct 21st century models of special education teacher development that are seamless, comprehensive, and cohesive across the various stages of a special educator's career span" (p. 101).

According to Rock et al., the four requirements listed below are foundational to the successful creation of 21st Century transformative models:

1. the **preservation of the role the federal government** has played in special education teacher development (Kleinhammer-Tramill, Tramill, & Brace, 2010; Kleinhammer-Tramill, Tramill, & Westbrook, 2009);

2. **teacher educators embracing the shift from 20th century teacher development to 21st century teacher development** (Brownell et al., 2010; Dukes et al., 2014; Rock & Billingsley, 2015; Sindelar & Rosenberg, 2000);

3. attending to the complexities and challenges of special education which require the **development of full professional standing and higher standards** (Connelly & Rosenberg, 2009; Leko et al., 2015), **consistent approaches to assessing teacher readiness** throughout the span of a special educator's career (Council for Exceptional Children, 2012; McCall et al., 2014), **continued research** (Rock & Billingsley, 2014), **increased federal government investment** (Burke et al., 2013),

4. and the **combined effort of special educators and visionaries** to "strategically and systematically **leverage 21st century driving forces of change and innovation** to make transformative models a reality (Fullan, 2011)" (102)

Conceptual Framework for the 21st Century Drivers
Rock et al., use Tichy's Technical, Political and Cultural Dynamics Theory (TPC, 1983) as a framework. This framework suggests that there are technical, political, and cultural factors that need to be addressed systematically and simultaneously in order to overcome challenges and achieve change. The authors also draw on four drivers that Fullan (2011) argues are necessary to achieve reform in education, which are: capacity building (professional learning), group work (high expectations, leadership), pedagogy (effective instruction, and systemness (systemic synergy). They integrate Fullan's drivers within Tichy's model to align pedagogy and capacity building (as technical), group work (as cultural), and systemness (as political). In addition, Rock et al., identify five further drivers based on Marx's (2014) work: technology (i.e. the digital revolution), diversity (i.e. the diversity gap), authority (i.e. the credibility factor), continuous improvement (i.e. the demand for collective impact), and ingenuity (i.e. the culture of we). In aligning Marx's trends with Tichy's framework they identify digital revolution and credibility factor as technical, the diversity gap and culture of we as cultural, and the demand for collective impact as political.

A New Approach
Rock et al., go on to address each of these drivers (the digital revolution, the credibility factor, the demand for collective impact, the diversity gap and the culture of we).

21st Century Drivers	What is Needed	Author's Suggestions
Driver 1: The Digital Revolution	Embedding technology into teacher coursework and clinical experiences.	• Content acquisition podcasts (CAPS) (Kennedy, Driver, Pullen, Ely, & Cole, 2013) • TEACH LivE (Dieker et al., 2014) • Video models, video annotations, and digital exhibitions (Hatch & Grossman, 2009) • Technology-enabled observation, supervision, and coaching (Rock et al., 2014) • Makerspace environments (Kurti, Kurti, & Fleming, 2014) • Iris Modules (https://iris.peabody.vanderbilt.edu/) • Twitter chats (#pbischat@https://twitter.com/pbischat) • Google Hangouts/ooVoo
Driver 2: The	Collaborative relationship	• Targeting specific populations though non-white media

		outlets.
Diversity Gap	building across school systems, institutions of higher education, state and national regulators, and minority communities (Mead, Aldeman, Chuong, & Obberd, 2015) to diversify the special education workforce.	• Attracting middle/high school students, community members, paraprofessionals, etc. • Financial incentives • Flexible training options • Institutions of Higher Education (IHEs) undertaking actions to support diversity (i.e. academic advising, university mentoring, paid internships, etc.)
	Teacher retention	• Academic, financial, and social supports (job-embedded) • Racial and gender awareness training for administrators • Support/mentoring for teachers of color
Driver 3: The Credibility Factor	Pre- and in-service special educators knowledge of Evidence-Based Practices (EBPs).	• Special education community identifying effective EBPs • Differentiating which type of preparation programs offer the best teacher development • Innovation Configurations (ICs) to develop and evaluate program development
Driver 4: The Demand for Collective Impact	Higher professional standards	• Increasing teacher preparedness by increasing practice teaching opportunities and methods related coursework (Ronfeldt, Schwartz, and Jacob, 2014). • Development of reliable ways to establish the relationship between special education teacher preparation and student achievement. • Use of multiple research approaches (i.e. quasi-experimental research, single-case design, qualitative inquires, mixed methods research)
Driver 5: Culture of We	Collaboration	• Use of collaboration models, school-wide problem solving frameworks (RTI, PBIS, and MTSS) • Teacher training in group theory, group skills, and conflict resolution • Development of collaboration through team-based, job embedded professional development for in-service educators