Information for the March 24, 2017 TeachingWorks Journal Club Meeting

We will discuss the following two articles in this meeting:

1. Philpott, C. (2017). Medical models for teachers' learning: Asking for a second opinion. *Journal of Education for Teaching*, *43*(1), 20-31.

2. Christ, T., Arya, P., & Chiu, M. M. (2017). Video use in teacher education: An international survey of practices. *Teaching and Teacher Education*, *63*, 22-35.

In addition, bibliographic information is below for other relevant articles published in the following journals between December 15, 2016 and February 15, 2017.[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

--
Beilstein, S.O., Perry, M. and M.S. Bates (2017). Prompting meaningful analysis from pre-service teachers using elementary mathematics video vignettes. *Teaching and Teacher Education*, *63*: 285-295.
> Learning from video is a theoretically grounded and popular professional development activity. In online professional development communities, however, responses to video are often shallow and lack meaningful commentary about issues that surround teaching and learning mathematics. By altering the framing conditions that accompany video clips posted to the Everyday Mathematics Virtual Learning Community, this study examined whether more deeply analytical comments could be elicited from pre-service teachers. Findings highlight the malleability of pre-service teachers' commentary, as their levels of analysis varied in relation to manipulations of perceived audience (expert or peer) and focus requested (on students, the teacher, or unspecified).

Cheung, S.K., Ling, E.K.-w., and S.K.Y. Leung (2017). Beliefs associated with support for child-centred learning environment among Hong Kong pre-service early childhood teachers. *Journal of Education for Teaching*, *43*(2): 232-244.
> The physical, social and temporal dimensions of the classroom environment have an important role in children's learning. This study examines the level of support for child-centred learning, and

---
[1] For the March 24, 2017, TeachingWorks journal club we considered the following journals:
Action in Teacher Education (no new issues since previous meeting: 38(4)); American Educational Research Journal (no new issues since previous meeting: December 2016, 53(6)); Educational Evaluation and Policy Analysis (March 2017, 39(1)); Elementary School Journal (no new issues since previous meeting: December 2016, 117(2)); Journal of Education for Teaching: International Research and Pedagogy (2017, 43(1); 2017, 43(2)); Journal of Teacher Education (January/February 2017, 68(1)); New Educator (2017, 13(1)); Teachers College Record (118(13); 118(14); 119(1)); Teaching and Teacher Education (February 2017, 62; April 2017, 63); Urban Review (March 2017, 49(1)).

its associated beliefs, that is provided by Hong Kong's pre-service early childhood teachers. Two hundred and seventy-five students from a pre-service early childhood teacher training programme completed a questionnaire; in general, these students believed that teachers should create physical, social and temporal environments which are child-centred in early childhood education settings. Linear regression analyses showed that the students' perceived importance of fostering children's social and communication competence in early childhood programmes, and their belief in children's competence in self-learning, were significant positive correlates of their level of support for all dimensions of child-centred learning environment. Their self-perceived competence in managing children's behaviours was, however, a significant negative correlate of their level of support for child-centred social and temporal environment. This study then discusses the implications of these findings for pre-service early childhood teacher education.

Christ, T., Arya, P., and M.M. Chiu (2017). Video use in teacher education: An international survey of practices. *Teaching and Teacher Education*, *63*: 22-35.

Video use in teacher education can improve teacher/student learning, but teacher educators' extent/uses of video, or what supports or hinders their uses, have not been documented. This study explores these issues. 208 teacher educators'' survey responses regarding their practices across 977 teacher-education courses during one academic year were analyzed using multilevel, multivariate outcome analyses to identify relations between explanatory variables (institutional supports or barriers, teacher-educator characteristics, course attributes, educator beliefs, and video properties) and types of video uses (self-reflection, peer discussion, professor-led discussion, case studies, and multimedia). Findings show often infrequent/unvaried use of video. More frequent/varies video methods are needed.

Corcoran, R.P. and J. O'Flaherty (2017). Executive function during teacher preparation. *Teaching and Teacher Education*, *63*: 168-175.

This three-year study examined executive function development during teacher preparation. The sample consisted of 231 students in spring at Time 1, 36 students at Time 2, and 109 students at Time 3. Results indicate a non-significant decrease in the longitudinal mean change of metacognition index (MI) and behavioural regulation index (BRI) over time. MI growth trajectories had a nonlinear trend, while BRI growth trajectories had a linear trend during pre-service teacher preparation. Findings from the current study suggest that no value is added to students' executive functioning during three years of tertiary education. Implications for teacher preparation programs are discussed.

du Plessis, A.E. and E. Sunde (2017). The workplace experiences of beginning teachers in three countries: A message for initial teacher education from the field. *Journal of Education for Teaching*, *43*(2): 132-150.

Previous research indicates that beginning teachers are not fully prepared for what awaits them in the workforce. This study highlights the value of partnerships among higher education providers, schools and employers and links the experiences of beginning teachers to initial teacher education (ITE). Real-life experiences from the field provide information regarding beginning teachers' complex teaching positions that is beneficial to prospective teachers and teacher educators. This transnational qualitative study, completed in Norway, South Africa and Australia, adopted a Vygotskian social constructivist theoretical stance. Gadamer's hermeneutic philosophy was applied to offer an in-depth understanding of the effects of classroom experiences on beginning teachers' professional identities and feelings of "belonging" and "at homeness" in their positions. The results of this study highlight the school leaders' perceptions of how well graduate teachers are prepared to meet the demands of the workforce. The study concludes by demonstrating the value of linking beginning teachers' experiences to interventions and the development of ITE programmes. This study's evidence-based findings support its recommendations for policy-makers and its reflections on the link between ITE and employment.

Ekstam, U., Korhonen, J., Linnanmäki, K., and P. Aunio (2017). Special education pre-service teachers' interest, subject knowledge, and teacher efficacy beliefs in mathematics. *Teaching and Teacher Education*, *63*: 338-345.

> Teacher efficacy beliefs is an important characteristic to predict instructional quality and the level of cognitive activation and educational support. Since teacher efficacy beliefs are context and domain specific, this study focuses on how special education pre-service teachers' individual interest and subject knowledge in mathematics predict their efficacy beliefs in teaching mathematics. Data were collected from 57 special education pre-service teachers. The results indicated that the individual interest of pre-service teachers has a strong effect on teacher efficacy beliefs, while subject knowledge has only an indirect effect.

Evans, N., Stevenson, R.B., Lasen, M., Ferreira, J.-A., and J. Davis (2017). Approaches to embedding sustainability in teacher education: A synthesis of the literature. *Teaching and Teacher Education*, *63*: 405-417.

> This study investigated how teacher education academics embed sustainability education in learning and teaching, using a systematic literature review of peer-reviewed journal articles. A taxonomy of four distinctive approaches was developed: (1) embedding sustainability education widely across curriculum areas, courses, and institution; (2) through a dedicated core/compulsory subject; (3) through a component of a core/compulsory subject; and (4) through a dedicated elective subject. This paper investigates the differing rationales, theoretical frames and pedagogical approaches used and identifies the perceived challenges underpinning each of these approaches. The final section offers an analysis and discussion of the implications of our review findings for teacher education academics and researchers, and others in the broader academic community who are interested in change towards sustainability through education.

Fives, H. and N. Barnes (2017). Informed and uninformed naïve assessment constructors' strategies for item selection. *Journal of Teacher Education*, *68*(1): 85-101.

> We present a descriptive analysis of 53 naïve assessment constructors' explanations for selecting test items to include on a summative assessment. We randomly assigned participants to an informed and uninformed condition (i.e., informed participants read an article describing a Table of Specifications). Through recursive thematic analyses of participants' explanations, we identified 14 distinct strategies that coalesced into three families of strategies: Alignment, Item Evaluation, and Affective Evaluation. We describe the nature of the strategies and the degree to which participants used strategies with frequency and effect size analysis. Results can inform teacher education on assessment construction through explicit instruction in the three families of strategies identified.

Gardiner, W. (2017). Mentoring "inside" and "outside" the action of teaching: A professional framework for mentoring. *The New Educator*, *13*(1): 53-71.

> This study seeks to contribute to the research on mentored induction by investigating the practices mentors employ in their work with new teachers in two high-need, high-poverty urban elementary schools. Informed by Schwille's (2008) temporal framework of "educative" mentoring practices occurring "inside" and "outside" the action of teaching, this study investigated the range of practices mentors employed, new teachers' perceptions of the practices, and if the practices contributed to new teachers' professional learning. Participants included six new teachers and two induction mentors. Results indicate that "inside" and "outside" mentoring practices are complementary and should be conceived as assisted performance and judiciously selected to promote productive changes in new teachers' practice. Recommendations for mentoring programs are provided.

Glazier, J.A., Boyd, A., Bell Hughes, K., Able, H., and R. Mallous (2017). The elusive search for teacher collaboration. *The New Educator*, *13*(1): 3-21.

> Collaboration is a well-used term in the field of education, identified as promising practice for student learning and teaching learning alike. However, collaboration comes in different shapes and sizes, leading to radically different ends. The authors examine teachers' own understandings and practices of collaboration with teacher colleagues within their school contexts and within a professional development model designed to allow for collaborative conversation between teachers. Implications for teacher education are then considered.

Gleeson, J., Sugrue, C., and J. O'Flaherty (2017). Research capacity and initial teacher education reform: Irish experiences, international perspectives. *Teaching and Teacher Education*, *62*: 19-29.

> As globalisation intensifies and economies struggle to address 'austerity', educational reform continues unabated. In the case of initial teacher education (ITE) the pendulum swings between practice and research with a growing emphasis on teacher educators' expertise. International ITE discourses provide an important context for recent Irish policy and reforms. Against this backdrop, the findings of a systematic study of the research capabilities and activities of ITE faculty are critically analysed and discussed. The evidence indicates a considerable mismatch between policy intentions and teacher educators' current capacities. Policy implications are identified and discussed and their possible significance for other systems considered.

Hall, J.M. and S.D.C. Townsend (2017). Using critical incidents and E-Portfolios to understand the emergent practice of Japanese student-teachers of English. *Teaching and Teacher Education*, *62*: 1-9.

> This paper argues that resolving cognitive or emotional conflicts experienced in practice can promote student-teacher development and bridge the theory-practice divide. Critical incident (CI) writing in ePortfolios is introduced as a means for student-teachers to record conflicts experienced and what was learned from them. Ten student-teachers of English from a Japanese university did a 2-week teaching practicum at three Thai secondary schools recording their CIs in an ePortfolio. Using the CI technique, we identified the teaching concepts and techniques which emerged and discuss the implications for teacher learning. Lastly, we introduce an ePortfolio design to better bridge the theory-gap divide.

Heinz, M., Keane, E., and K. Davison (2017). Sexualities of initial teacher education applicants in the Republic of Ireland: Addressing the hidden dimension of diversity in teaching. *Journal of Education for Teaching*, *43*(1): 99-116.

> While research and policy recommendations internationally have pointed to the need to diversify teaching populations with regard to ethnicity, social class background and, to a lesser extent, dis/ability, there is a paucity of research addressing sexualities as a diversity dimension in teaching. This article explores initial teacher education (ITE) applicants' and entrants' (N = 746) sexualities and the intersections of sexualities with other socio-demographic background variables and career motivations. The analysis suggests that the topic of sexual orientation caused high levels of discomfort among respondents and that sexual minority student teachers are underrepresented in ITE cohorts in Ireland. The socio-demographic and motivational profiles of our non-heterosexual respondents generally mirrored those of their heterosexual counterparts. Non-heterosexual respondents reported a stronger motivation to affect social change and lower levels of participation in religious services. Findings are discussed within the context of persisting cultural and institutional barriers for sexual minority (student) teachers in Irish schools and in ITE.

Hennissen, P., Beckers, H., and G. Moerkerke (2017). Linking practice to theory in teacher education: A growth in cognitive structures. *Teaching and Teacher Education*, *63*: 314-325.

> There are doubts about the effectiveness of teacher education regarding professional behavior of pre-service teachers. Theory is part of teacher education, but is not embedded in teaching practice. This research examines whether a curriculum succeeds in linking theory to preservice

teachers' experiences. In this study, 136 first year pre-service teachers carried out a case test and a card-sorting task, both before and after a specific curriculum program. Measurements show that pre-service teachers' cognitive schemata had grown, that their conceptual knowledge had expanded and that they experienced a linkage of practice to theory to a reasonable degree within the program.

Hökkä, P., Vähäsantanen, K. and S. Mahlakaarto (2017). Teacher educators' collective professional agency and identity – Transforming marginality to strength. *Teaching and Teacher Education*, *63*: 36-46.
This study investigated teacher educators' collective professional agency and identity within an identity coaching programme. The participants in the programme were teacher educators from the field of arts and crafts education. Through a shared process involving increased trust and togetherness, the teacher educators became empowered in terms of their collective identity and agency. The study points to the importance of addressing individual narratives and learning pathways in seeking to understand emergent collective agency and identity in professional contexts. Our theoretical contribution includes an advanced understanding of collective identity and agency, and of their close relationship.

Kallunki, V., Karppinen, S., and K. Komulainen (2017). Becoming animated when teaching physics, crafts and drama together: A multidisciplinary course for student-teachers. *Journal of Education for Teaching*, *43*(1): 32-47.
This article examines a physics course for pre-service primary teachers in which physics, crafts and drama were taught together by connecting the standpoints of crafts and drama. The study was carried out by three university educators from these disciplines during an advanced optional course for student-teachers at the University of Helsinki in Finland. This article discusses the impact of the multidisciplinary teaching approach on the participants' learning outcomes. First, the article explains the multidisciplinary teaching model, an educational energy game that the student-teachers designed as part of the course. Second, it describes the learning that emerged from the student-teachers' learning process, including (1) learning skills, (2) new pedagogic thinking and (3) a change of attitude towards integrative teaching. Finally, the analysis shows the strength of sociocultural animation, which is traced through a path of becoming animated.

Kang, H. (2017). Preservice teachers' learning to plan intellectually challenging tasks. *Journal of Teacher Education*, *68*(1): 55-68.
This study explores how and under which conditions preservice secondary science teachers (PSTs) engage in effective planning practices that incorporate intellectually challenging tasks into lessons. Drawing upon a situative perspective on learning, eight PSTs' trajectories of participation in communities of practice are examined with a focus on planning throughout student teaching. Data include 32 sets of teaching artifacts, interviews with PSTs, interviews with methods course instructors, and interviews with mentor teachers. The analyses show that instructional tasks observed at the beginning of lessons link to the ways in which PSTs engage in the three interrelated processes of (a) framing instructional goals, (b) constructing a lesson scenario, and (c) addressing problems of practice. The consistencies and changes observed in the PSTs' trajectories of planning reveal the dynamic, responsive, and contentious nature of planning situated in local contexts. Three implications for designing productive learning opportunities for PSTs are discussed.

Larsen, M.A. and M.J. Searle (2017). International service learning and critical global citizenship: A cross-case study of a Canadian teacher education alternative practicum. *Teaching and Teacher Education*, *63*: 196-205.
This study aimed to demonstrate how an international experience within a teacher education program shaped student teachers as global citizens. Our cross-case study of two cohorts of student teachers who participated in an international service learning practicum demonstrates the

nuanced ways that international placements influence the development of critical global citizens and the impact on their teaching. Survey and interview responses, collected 3-12 months post-practicum, demonstrate that while there is considerable evidence that participants became culturally aware global citizens, there is less evidence that they became critical global citizens, who actively respond to inequities within and outside of the classroom.

Ma, X. and X. Gao (2017). Metaphors used by pre-service teachers of Chinese as an international language. *Journal of Education for Teaching*, *43*(1): 71-83.

This inquiry explored 68 pre-service perceptions and aspirations of Teaching Chinese as an International Language (TCIL) teachers by analysing the metaphors they used to describe themselves as teachers. The inquiry revealed that the participants used a variety of metaphors to project the images of themselves as pre-service TCIL teachers. The results also confirm that the participants' use of metaphors, as powerful tools to understand the complexity of teaching, reflects the mediation of cultural, historical and sociopolitical conditions. These findings help teacher educators to support TCIL teachers' professional development by engaging them in critical dialogues about the metaphors they use to perceive themselves as TCIL teachers. They also help teacher educators to adopt tailor-made pedagogical content to address their development needs.

McGarr, O., O'Grady, E., and L. Guilfoyle (2017). Exploring the theory-practice gap in initial teacher education: Moving beyond questions of relevance to issues of power and authority. *Journal of Education for Teaching*, *43*(1): 48-60.

The "theory-practice divide" in teacher education can be viewed not simply as an acceptance of a body of knowledge but instead an acceptance of the teacher educator's authority to determine what is relevant educational theory. This research aimed to explore student teachers' views of "educational theory" and how it was discursively positioned relative to their practice in an attempt to examine whether their acceptance or rejection of it was also related to accepting the authority of the teacher educator. Using one-to-one interviews with 23 student teachers and employing a discourse analysis, four categories of students emerged. The paper describes these four categories and discusses the implications of these findings for initial teacher education and our understanding of the "theory-practice" gap.

McLennan, B., McIlveen, P. and H.N. Perera (2017). Pre-service teachers' self-efficacy mediates the relationship between career adaptability and career optimism. *Teaching and Teacher Education*, *63*: 176-185.

Teachers' self-efficacy is positively associated with job satisfaction and commitment. What is less clear in the teacher education literature is to what extent pre-service teachers' self-efficacy influences and is influenced by other psychological factors associated with career engagement. The current research contributes to understanding the complex of interrelations by demonstrating that pre-service teachers' self-efficacy directly predicts their career optimism and mediates the effect of career adaptability on career optimism. With regard to pre-service teacher education, these findings are significant because, like self-efficacy, career adaptability and career optimism are amenable to promotion via learning experiences. Thus, professional learning activities may be tailored to focus on the development of self-efficacy to indirectly enhance pre-service teachers' career adaptability and career optimism.

Mohamed, Z., Valcke, M., and B. De Wever (2017). Are they ready to teach? Student teachers' readiness for the job with reference to teacher competence frameworks. *Journal of Education for Teaching*, *43*(2): 151-170.

This is the first report in a series of studies concerning student teachers' readiness-for-the-job, defined by a framework of 11 international teacher competences (ITCs). Attaining readiness-for-the-job is connected to four characteristics of teacher education, namely; (1) employing the ITCs

in day-to-day teaching in initial teacher education, (2) integrating the ITCs in the curricula of teaching programmes, (3) exercising the ITCs through practicum at schools and (4) by teacher educators modelling the ITCs. In the present study, a student sample from four teacher education colleges (n = 226) was surveyed to explore the extent to which students felt ready-for-the-job. The study outlines the degree to which the characteristics of teacher education are associated with student teachers' readiness-for-the-job. The results identify the critical areas to be developed in these prospective teachers before they can actually become ready-for-the-job, and especially the central role of their teacher educators in shaping their professional competence.

Philpott, C. (2017). Medical models for teachers' learning: Asking for a second opinion. *Journal of Education for Teaching*, *43*(1): 20-31.

Recently there has been renewed interest in basing teachers' professional learning on medically derived models. This interest has included clinical practice models and evidence-based teaching as well as the use of various forms of "Rounds" which claim to derive from medical rounds. However, many arguing for these approaches may well not have a detailed knowledge of the actuality of professional learning in medicine but may be basing their ideas on idealised models drawn from popular conceptions. In addition, the model used by some calling for medically derived teacher learning is biomedicine, an area in which parallels with Education are difficult. This paper argues that mental health and public health provide a better analogue for Education than biomedicine. It considers some of the lessons that can be drawn from research on evidence-based practice in these areas. The paper concludes that a way forward is neither uncritically to assume the superiority of medical models of professional learning nor to rely only on empirical evidence from Education, but rather to enter into dialogue with colleagues in mental and public health about shared concerns and experiences in professional learning.

Pollitt, K. and J. Oldfield (2017). Overcoming the odds: Exploring barriers and motivations for male trainee primary teachers. *Teaching and Teacher Education*, *62*: 30-36.

The study investigated male primary school trainee teachers' barriers and motivations for their profession. Six male trainee primary school teachers were interviewed and data were analysed thematically. Three themes arose relating to potential barriers; physical contact; experiencing negative outsider perceptions; and working within a female orientated environment. Three themes demonstrated that barriers could be overcome if participants perceived the profession as a constructive career; had positive experiences of working in a supportive environment; and were seen as effective role models. Primary teacher training courses should not only aim to reduce barriers but also highlight the positive aspects that enhance motivation.

Preston, C. (2017). University-based teacher preparation and middle grades teacher effectiveness. *Journal of Teacher Education*, *68*(1): 102-116.

For over two decades, there have been calls to assess the relationship of the features of teacher preparation programs to teacher effectiveness, to provide guidance for program improvement. At the middle grades level, theory suggests that coursework in educational psychology is particularly important for teacher effectiveness. Using 4 years of data from 15 middle grades teacher preparation programs, this study estimates the relationship of their structural features, that is required elements of coursework and fieldwork, to student achievement gains in math and English/Language Arts. Findings suggest that few requirements are positively associated with achievement gains.

Reeves, T.D. (2017). Pre-service teachers' data use opportunities during student teaching. *Teaching and Teacher Education*, *63*: 263-273.

Education systems internationally are implementing data use initiatives with the aim of improving student learning. As teachers are key actors in the implementation of such initiatives, this study explored pre-service teachers' (N = 142) opportunities to learn how to use data during pre-service

education, specifically student teaching. The study also examined how student teacher data use varies by school level and relevant coursework and in-school learning experiences. Findings suggest that student teaching might plausibly serve as a source of experiential learning relative to data use, especially at the elementary level, and regardless of pre-service teachers' prior or concurrent teacher education experiences.

Sanya Pelini, E. (2017). Analysing the socio-psychological construction of identity among pre-service teachers. *Journal of Education for Teaching*, *43*(1): 61-70.
   A teacher's representation of self is crucial in how they construct their identity. In this article, it is argued that pre-service teachers' identities are intricately linked to their perceptions of the teaching profession. This paper explores the social construction of identity among pre-service teachers and the implications for professional identity. It focuses on pre-service teachers in Kenya. The findings presented here are primarily based on semi-structured interviews distributed among students enrolled in a Kenyan university. They highlight pre-service teachers' difficulty in overcoming the negative perceptions of the profession and building positive identities of self as teacher. They also underscore the need for training programmes that take perceptions and representations of the teaching profession into account when formulating training curricula.

Scandurra, C., Picariello, S., Valerio, P., and A.L. Amodeo (2017). Sexism, homophobia and transphobia in a sample of Italian pre-service teachers: The role of socio-demographic features. *Journal of Education for Teaching*, *43*(2): 245-261.
   Although recent research has highlighted that lesbian, gay, bisexual and transgender (LGBT) youths represent a resilient population, they still suffer from social stigma and oppression, being potentially at additional risk of developing negative mental health outcomes. One of the main environments where violence and harassment against this population are present is the school. Within school contexts, the impact that teachers can have on the educational experiences of LGBT youths seems to be a crucial point. This paper explored sexist, homophobic and transphobic attitudes among 438 pre-service teachers in relation to specific socio-demographic features. Results indicated that being male, heterosexual, conservative and currently religious were positively associated with sexist, homophobic, and transphobic attitudes and feelings, and having a LGBT friend was negatively associated with homophobic and transphobic attitudes and feelings. These results suggest the need to introduce specific training on the deconstruction of gender and sexual stereotypes and prejudices, to provide teachers with efficient tools to address diversity in the classrooms and to implement inclusive school policies. Suggestions for the implementation of good practices are provided.

Shawer, S.F. (2017). Teacher-driven curriculum development at the classroom level: Implications for curriculum, pedagogy and teacher training. *Teaching and Teacher Education*, *63*: 296-313.
   This paper examined the motives behind EFL/ESL classroom-level curriculum development. The study was grounded in teacher curriculum development (Craig, 2006), curriculum implementation (Snyder, Bolin & Zumwalt, 1992) and teacher curriculum-making (Doyle, 1992). Individual teacher interpretations of the same (formal) curriculum drive teachers to transform a single curriculum into multiple (taught) curricula through teacher and student experiences in different contexts. Teacher interpretations also inspire teachers to adopt particular learning outcomes, content, teaching strategies, and assessment targets and methods rather than others. Since teacher curriculum interpretations drive teachers to make different decisions about the same curriculum, teachers either develop or transmit curriculum at the classroom level (Jackson, 1992). Being so, possible factors behind classroom-level curriculum developments were examined to illuminate curriculum design, implementation and development, alongside teaching, learning and teacher training. Moreover, this research design made use of the qualitative paradigm through qualitative case-studies, qualitative interviews, participant observations and the constant comparative method to understand individual constructions of the taught curriculum. Major findings indicate preservice

teacher training, teaching experience, and teacher content and teaching styles were significant motives behind classroom-level curriculum developments. Other factors include curriculum policy in terms of curriculum content, pedagogical and assessment orientations, teacher curriculum development opportunities and teacher soft skills. The study provides recommendations for curriculum and instruction, teacher education and future research.

Sinnema, C., Meyer, F., and G. Aitken (2017). Capturing the complex, situated, and active nature of teaching through inquiry-oriented standards for teaching. *Journal of Teacher Education*, *68*(1): 9-27.
     Given widespread acceptance of the role of teaching in improving student outcomes, it is not surprising that policy makers have turned to teaching standards as a lever for educational improvement. There are, however, long-standing critiques of standards that suggest they are reductionist and promote a dualism between theory and practice. Our purpose here is to propose a model of Teaching for Better Learning (TBL) that responds to those critiques and that captures the complexity of teaching rather than focusing on discrete elements. Our model foregrounds the salience of teachers' own situations and the active nature of teachers' practice in a way that integrates practice with relevant theory. We outline how the TBL model can be used to derive inquiry-oriented teaching standards, an alternative approach that challenges widely accepted conventions for the design of standards and, we argue, might better support the improvement of teaching and learning.

Stephenson, J. (2017). An overview of survey-based research carried out with Australian preservice teachers (1995–2015). *Teaching and Teacher Education*, *63*: 159-167.
     Teacher preparation in Australia is, as in other countries, a frequent topic of discussion and inquiries. This paper provides an overview of survey-based research, published in refereed journals from 1995 to 2015 where Australian preservice teachers were the respondents. The findings of the study were that commonly the surveys were small-scale with respondents most likely to be elementary school preservice teachers. Most surveys addressed attitudes, perceptions or beliefs and less frequently skills and knowledge. The reporting of many surveys was poor. There was a dearth of surveys recruiting from more than two universities, and hence a lack of meaningful comparisons of courses that could inform policy direction.

Stockero, S.L., Rupnow, R.L., and A.E. Pascoe (2017). Learning to notice important student mathematical thinking in complex classroom interactions. *Teaching and Teacher Education*, *63*: 384-395.
     Noticing students' mathematical thinking is a key element of effective instruction, but novice teachers do not naturally engage in this practice. Prospective secondary school mathematics teachers were engaged in an intervention grounded in analysis of minimally edited video from local secondary school mathematics classrooms; the goal was to support their ability to notice important student thinking within the complexity of instruction. Evidence of participants' learning in five iterations of the intervention is discussed, including their focus on student mathematical thinking, their ability to discuss the mathematics in that thinking, and their ability to notice particular high-leverage instances of student thinking.

Stoehr, K.J. (2017). Mathematics anxiety. *Journal of Teacher Education*, *68*(1): 69-84.
     Mathematics educators agree elementary teachers should possess confidence and competence in teaching mathematics. Many prospective elementary teachers (particularly women) pursue careers in elementary teaching despite personal repeated experiences of mathematics anxiety. Previous studies of mathematics anxiety have tended to focus on physical sensations that occur during test-taking situations. This study analyzes how three women prospective elementary teachers described, explained, and related their experiences of mathematics anxiety while learning mathematics as K-12 students and while learning to teach mathematics. My research reveals that mathematics anxiety may reach beyond assessment situations and impact women prospective elementary teachers' larger mathematical histories. I show how women prospective

elementary teachers may interpret mathematics anxiety as specific fears (e.g., loss of social belonging, loss of personal identity, or loss of practical competency) and how specific coping strategies may be invented to cope with the fear. I present evidence of how coping strategies may impede mathematics learning.

Toom, A., Pietarinen, J., Soini, T., and K. Pyhältö (2017). How does the learning environment in teacher education cultivate first year student teachers' sense of professional agency in the professional community? *Teaching and Teacher Education*, *63*: 126-136.
> This study investigated Finnish first year student teachers' (N = 244) sense of professional agency in the professional community, their perceptions of teacher education as a learning environment, and the interrelation between these two. Student teacher's professional agency in the professional community consists of motivation to learn, efficacy beliefs of learning, and intentional strategies for promoting school development and student learning. The results showed that student teachers' sense of professional agency in a professional community consisted of the complementary components of utilization of feedback, appreciation of collective efficacy, sense of community, striving for developments, and seeking help actively. As the characteristics of the learning environment, social support, equality, climate and recognition were emphasized.

Trevethan, H. (2017). Educative mentors? The role of classroom teachers in initial teacher education. A New Zealand study. *Journal of Education for Teaching*, *43*(2): 219-231.
> Classroom experience is an important part of initial teacher education (ITE) and the teachers who work with student teachers in schools have a significant impact on learning in this context. While many studies have documented what the role of these teachers should be, it is also important to consider how the role is conceptualised by the teachers themselves. This qualitative study compares the views of New Zealand primary school teachers with that of an ITE provider. The findings show some differences among the teachers and significant differences between classroom teachers' interpretations of their role and the expectations of the ITE provider. Teacher interpretations are firmly held and there is more work to be done to explore understandings of educative mentoring and so develop a coherent shared vision of roles in the practicum community.

Uibu, K., Salo, A., Ugaste, A., and H. Rasku-Puttonen (2017). Beliefs about teaching held by student teachers and school-based teacher educators. *Teaching and Teacher Education*, *63*: 396-404.
> Teachers' beliefs about teaching goals and practices are influenced by several factors, including teaching and mentoring experiences. To identify which teaching goals and practices are preferred for the social and cognitive development of pupils, 112 student teachers and 73 school-based teacher educators were questioned. In contrast to teacher educators, student teachers consider the mechanical acquisition of knowledge and practices that support intrapersonal processes directed toward cognitive development to be a more effective goal, while teachers with mentoring experience prefer teaching practices that support pupils' social development. Knowledge about teaching-related beliefs is essential for promoting effective teacher training.

Voet, M. and B. De Wever (2017). Preparing pre-service history teachers for organizing inquiry-based learning: The effects of an introductory training program. *Teaching and Teacher Education*, *63*: 206-217.
> The present study investigates a training program aimed at preparing pre-service history teachers for organizing inquiry-based learning (IBL) in class. This program consisted of a workshop and an assignment during the teaching internship period. Pre- and posttests indicate that the workshop had a significant effect on self-efficacy and attitude toward IBL, but also that most student teachers' attitudes had again changed after the assignment. Related to this, student teachers' lesson plans revealed three different templates, representing distinct interpretations of 'inquiry'. An analysis of reflection papers and interviews describes how the context of the teaching internship further shaped student teachers' thinking.

Wilkins, C. (2017). 'Elite' career-changers and their experience of initial teacher education. *Journal of Education for Teaching*, *43*(2): 171-190.

>This study explores the motivation of "high-status" professionals to change career and enter teaching, and their experience of undertaking initial teacher education (ITE) programmes in England. The study builds on previous research which found that career-changers are disproportionately more likely to fail to complete their ITE studies, and that those who do complete the transition into teaching frequently experience frustration with some aspects of induction and often feel undervalued by their new colleagues. The participants in this study were largely positive about most aspects of their ITE experience, and felt their professional background enabled them to be resilient when faced with the challenges of transitioning from being an expert in one domain to novice in another. However, they report variable experiences of mentoring, and for some, a sense of their previous experience being under-appreciated by ITE tutors and schools. The study also finds little evidence of personalisation built into ITE programmes to take account of the distinctive needs of career-changers. This paper concludes that the current policy focus adopted in England and in many other countries on entry quality may detract from the more fundamental issue of ensuring ITE programmes provide the flexible and personalised professional learning environments that enable a diverse range of entrants to flourish.

Wyss, C., Kocher, M., and M. Baer (2017). The dilemma of dealing with persistent teaching traditions: Findings of a video study. *Journal of Education for Teaching*, *43*(2): 191-205.

>Nowadays, there is a consensus that good teaching and learning needs instructional variation and personalised forms of learning. In teacher education, these concepts have been implemented for years, and prospective teachers are taught accordingly; it is thus assumed that the teaching of novice teachers is in accordance with these new teaching concepts. In the research project "ALPHA," the teaching of novice teachers at the beginning and at the end of their first year in the profession and the teaching of experienced teachers with five or more years of teaching experience was videotaped, so that longitudinal and cross-sectional comparisons were possible. The lessons were analysed by applying a coding system on the instruction and by employing a rater inventory in order to understand the structure and quality of the lessons. Overall, the results indicate high levels of whole class teaching with a rather high level of traditional classroom instruction both for the novice and the experienced teachers. However, the proportions vary depending on the location of teacher education. The results provide evidence that the new teaching concepts learned on the teacher education programme are not necessarily implemented in the classroom and provide possible reasons why this might be the case.

Yan, C. and C. He (2017). Pair microteaching: An unrealistic pedagogy in pre-service methodology courses? *Journal of Education for Teaching*, *43*(2): 206-218.

>Despite its inherent nature of artificiality, microteaching has been widely used as a routine procedure in pre-service teacher education courses to apply theoretical knowledge and develop practical teaching competence. Its importance in the practice element of teacher education programmes has given rise to a considerable amount of attention to its potential in research. However, there has been little or no research on pair microteaching, which is exploited as a circumstantial compromise and innovation. This article reports on a small-scale study of the effect of pair microteaching on EFL (English as a foreign language) student teachers' professional learning. Triangulated sources of data were collected qualitatively to investigate a group of 30 student teachers' perspectives about their eight-week-long microteaching experience on an English language teaching methodology course. The results show a high level of endorsement of the experience despite the drawbacks of limited practice opportunity and artificiality of the experience. The article concludes that pair microteaching can be a feasible pedagogy in methodology courses that can be supplemented by other forms of direct and indirect school experiences.

Journal Club Focus
For the March 24, 2017 session of the TeachingWorks Journal Club we will focus on the following two articles: (1) Philpott (2017); and (2) Christ, Arya & Chiu (2017). We see a connection between the topics in these journal articles and the work of TeachingWorks & the Michigan Program Network (MiPN) (including, for example, video use, teachers' learning, etc.). The MI Program Network (six university partners across Michigan) meets regularly to develop a common language and understanding of the high leverage practices, and to try out new approaches when training novices for their first year in the classroom. The Christ et al. (2017) article intersects well with recent applications of video use in teacher education to promote teacher development (cf., Ball, 2016)[2]. The Philpott article presents an international view of clinical practice models and calls for the consideration of the application of mental and public health approaches to teacher education and teacher development (see Grossman and McDonald, 2008)[3]. The Christ et al. article focuses on barriers and supports that promote the use of video to inform teacher preparation and teacher educator best practices.

Three Prompts to Consider
(1) Both medical models of professional education (e.g., PLCs, Rounding) and video usage in teacher education can foster robust communities of both initial and ongoing professional learning. Drawing from your professional experience, what do you think we can learn from these two approaches?
What features of collaborative structures and/or pedagogies do we see in our teacher education programs? What do we feel such features afford our teacher education efforts? Why?
(2) What might teacher educators learn from public and mental health models that attends to the limitations identified by Philpott of the biomedically derived model of evidence-based practice?
(3) Christ et al. found infrequent/unvaried use of video in teacher education courses. Discuss the implications of the results of the survey of practices concerning video use in teacher education relative to current use and further research.

Dr. Tanya Christ, Oakland University, will participate in an online Q & A session between 12:35-12:50.

During our review, we discovered that Dr. Carey Philpott, Professor of Teacher Education at Leeds Beckett University, died suddenly on Friday, January 6, 2017.

Philpott, C. (2017). Medical models for teachers' learning: Asking for a second opinion. *Journal of Education for Teaching*, *43*(1): 20-31.

Abstract
Recently there has been renewed interest in basing teachers' professional learning on medically derived models. This interest has included clinical practice models and evidence-based teaching as well as the use of various forms of "Rounds" which claim to derive from medical rounds. However, many arguing for these approaches may well not have a detailed knowledge of the actuality of professional learning in medicine but may be basing their ideas on idealised models drawn from popular conceptions. In addition, the model used by some calling for medically derived teacher learning is biomedicine, an area in which parallels with Education are difficult. This paper argues that mental health and public health provide a better analogue for Education than biomedicine. It considers some of the lessons that can be drawn from research on evidence-based practice in these areas. The paper concludes that a way forward is neither uncritically to assume the superiority of medical models of professional learning nor to rely only on empirical

---

[2] Ball, D. (2016, April). Learning to see, connect with, and build students' resources. Presentation at the 48th Annual National Council of Supervisors of Mathematics (NCSM) Conference, Oakland, CA.

[3] Grossman, P., & McDonald, M. (2008). Back to the future: Directions for research in teaching and teacher education. *American Educational Research Journal, 45*: 184-205.

evidence from Education, but rather to enter into dialogue with colleagues in mental and public health about shared concerns and experiences in professional learning.

Summary prepared by Daniel J. Quinn

Background

The author cites a renewed interest in modeling teachers' professional learning on medical learning such as clinical rounds (cf. Bain & Moje, 2012[4]; City et al., 2009; Del Prete, 2013), specifically noting recent advances in England, Scotland, Australia, and in the U.S. He argues that individuals advocating for such approaches might be basing their positions on idealized models drawn from popular conceptions of medicine. He cites Lilienfield et al. (2013), who proposed that assertions calling for a biomedicine approach were based on arguments of "eminence" (the perceived status and success of medicine) as well as "eloquence" (something that sounds persuasive despite a lack of evidence). Philpott proposes instead that clinical practice models and evidence-based practices might more fruitfully draw from mental and public health models than from biomedicine. The goal, according to the author, is to push for dialog concerning what medical, public health, and mental health literature could offer teacher education.

The author also refers to Lilienfield et al. (2013) to operationalize the following concepts: (1) *evidence-based practices* (EBP) where final authority lies with the practitioner; as compared to (2) *empirically supported therapies* (ESTs) found in mental and public health that emphasize the claimed authority of the evidence for a treatment. Lilienfield cautioned that context was important, because in some cases proposed treatments could result in prescriptions of practice that did not take sufficient account of individual or local circumstances or the expertise of practitioners in the field.

According to the author, existing biomedical models in teacher education have been divided into two groups: (1) one based on collaborative professional development (Professional Learning Communities (PLCs) or Teacher Learning Communities); and (2) another that emphasizes a Rounds structure tied to evidenced-based practices (EBP) like those in medicine (Grossman, 2010). Philpott asserts that PLCs and Rounds are often blurred in discussions and proposes that they are possibly related practices, given their similar assumptions and concerns. For example, these professionalized models' theories of action involve the co-generation and use of shared evidence for professional learning and ultimately for student achievement. In addition, PLCs and Rounds are sometimes comingled with business concepts like data-driven improvement, due to their strong emphasis on collaborative empirical observation. Philpott writes that the models tend to focus on "measurable pupil outcomes as an indicator of effective professional learning" (p. 5).

Rather than relying only on biomedical models like PLCs and Rounds, Philpott argues that the mixed successes of mental and public health would be more applicable to the problems of practice in teacher education. Unlike biomedicine, in public health, success often depends on influencing the behavior of a population, which might be more applicable to changes in practice among teachers who must teach large groups of students at once. He adds that practitioners in mental and public health often work with patients to discover their concerns and needs, and work to tailor treatment rather than prescribing a general model that "works" best (based on research). Moreover, progress (in both mental and public health) could, like in education, be linked to other social trends "such as poverty, security, and equality" (p. 9)—contextual factors that biomedical models do not consistently account for.

---

[4] Bain, R. B., & Moje, E. B. (2012). Mapping the teacher education terrain for novices. *Phi Delta Kappan, 93*(5): 62-65.

Questions Raised by the Author:

(1) "…how well [do] those advocating for medical models of teachers' professional learning understand the details and reality of medical learning?" (p. 6);

(2) "…whether the comparisons between teaching and medicine are being made with an appropriate form of medical practice?" (p. 7); and

(3) "What might education learn from evidence-based practice in public health and mental health?" (p. 10).

Recommendations

Philpott's analysis was based on a conceptual analysis of the clinical practice models. He asserts that a way forward is for researchers exploring the impact of medical education models in teacher preparation and development to enter into conversations with mental and public health professionals about shared concerns and experiences in professionalized learning. According to Philpott, the results of these conversations could lead to development of more robust models of medical based learning that take into account a full range of perspectives. He contends that mental and public health models potentially address some of the weaknesses of biomedicine.

Implications for the Future

In closing, the author states that he did not intend to argue against the value of evidence-based practices, but rather to raise awareness of the assumptions of the "superiority of medically derived professional learning" (p. 17) so that teacher education may be more careful and critical in its adoption of such models.

Further, the author highlights a larger concern: "Should [teacher education's] effort be primarily on generating a centralized body of authoritative evidence or should it be on developing practitioners who are sufficiently skilled, confident and knowledgeable to find and critically analyze available evidence and generate new evidence relevant to their context?" (Philpott, p. 13). If teacher educators are to base teachers' professional learning on evidence-based practices (EBP), what more can we learn from mental and public health that is not currently being presented in other models?

Christ, T., Arya, P., and M.M. Chiu (2017). Video use in teacher education: An international survey of practices. *Teaching and Teacher Education*, *63*: 22-35.

Abstract

Video use in teacher education can improve teacher/student learning, but teacher educators' extent/uses of video, or what supports or hinders their uses, have not been documented. This study explores these issues. 208 teacher educators'' survey responses regarding their practices across 977 teacher-education courses during one academic year were analyzed using multilevel, multivariate outcome analyses to identify relations between explanatory variables (institutional supports or barriers, teacher-educator characteristics, course attributes, educator beliefs, and video properties) and types of video uses (self-reflection, peer discussion, professor-led discussion, case studies, and multimedia). Findings show often infrequent/unvaried use of video. More frequent/varies video methods are needed.

Summary prepared by Michael G. MacDonald

Background

Video use in teacher education can involve a range of strategies that have been found to be associated with improvements to teaching practice (e.g., Arya, Christ, & Chiu, 2015; Christ, Arya, Chiu, 2016; Kearney, 2015). This research further indicates that a variety of approaches to video use have been found to differentially support improvements in teaching through providing opportunities for self-reflection, peer-reflection, and deeper teacher learning. In addition to the literature that examines advantages to video use, there is a body of literature that provides insights into the supports and barriers to technology use by teacher educators. This work examines factors such as educators' technical proficiency, institutional policy, institutional support, and time constraints to mention a few (see Jenkins, Browne, Walker, & Hewitt, 2011).

Christ et al. (2017) provide an empirical examination of the potential supports for and barriers to video use, in conjunction with an examination of various forms of video use in teacher education in an international sample. This paper extends earlier work in which Christ and her colleagues explored video use in a sample of Michigan teacher educators (see Arya et al., 2016).

The authors argue that the use of video in teacher education is closely related to improvements in teaching because it offers a rich context for learning that attends to socio-cultural considerations such as social interaction, modeling and scaffolding, and artifacts. Further, the authors note that video use is aligned with research on teacher professional development that calls for the co-construction of understanding within professional learning communities that is situated within meaningful contexts. Christ and her colleagues examine teacher educators' video use and factors that influence its use in order to identify trends for the improvement of teacher learning outcomes.

Questions Raised

The authors raise a number of important questions for consideration:
1. *"How do teacher educators use video?" (p. 25)*
2. *"What variables support or hinder video use in teacher education?" (p. 25)*

Method

The authors used an on-line survey to explore teacher educators' self-reported use of video in teacher education and related supports or barriers to its use. Participants were teacher educators who responded to one of the following: a post placed on Facebook, a post on various professional organizations that serve teacher educators, or an email invitation to participate by respondents to colleagues. Data analysis focused on video use across courses as the levels of analysis. Teachers' frequency of use of each type of video method (self-reflection, peer discussion, professor-led discussion, case study, multi-media) was

modeled with multivariate outcomes models. Video use was explored with the mediating variables teacher educator, course, availability of support, beliefs, and type of video use.

Results

The authors reported frequency and type of teacher educator video use with regard to teacher educator characteristics, course attributes, perceived support, beliefs, and video type. Two-hundred and eight respondents who taught a total of 977 courses completed the survey. Respondents were predominately: female (83%), US-based (97%), assistant professors (54%), literacy (50%) or science teacher educators (21%%).

Respondents used video about three times per course, most frequently to conduct case studies. Video was not frequently used for self-reflection and tended to be sourced from the internet, with a focus on teaching methods. Results confirmed prior research that teacher educators' use of video is facilitated by lower course loads and opportunities to observe colleagues' modeling of video use. In addition, results confirmed earlier findings that beliefs influence practices. Notable differences from prior research included findings of gender and disciplinary differences in video use that were linked to teacher educators' beliefs. For example, when literacy teacher educators believe that students' technology skills are a small barrier they are more likely to report using peer video discussions.

Recommendations

Christ et al. identify the following implications for teacher educators' use of video and strategies to support its use:

> (1) Given the infrequent video use reported in the study, and in light of prior studies which indicate video use can provide support for teacher learning, the authors recommend that teacher educators make more frequent use of video in their courses.

> (2) In response to the findings that video use method is associated with gender, disciplinary area, and teacher educator beliefs, the authors encourage teacher educators to use multiple video methods.

> (3) Teacher education institutions should provide supports, such as offering opportunities to collaborate with peers and forming networks to develop resources such as video libraries, in order to facilitate teacher educators' use of video.

> (4) Teacher education institutions should lessen course loads to allow for the time necessary integrate video methods into classes.

Implications for the Future

The authors suggest that future research that concerns the use of video by teacher educators should explore why characteristics such as academic rank, age, and gender were related to specific forms of video use. Further research should employ qualitative methods to better understand how these teacher characteristics are related to video use and how teacher educator learning communities may mediate such use. These reviewers recommend that further research should include a broader range of sample characteristics and use measures other than self-report to examine the contextual factors that have been preliminarily reported in the Christ study to influence video use.

Arya, P., Christ, T., & Chiu, M. M. (2015). Links between characteristics of collaborative peer video analysis events and literacy teachers' outcomes. *Journal of Technology and Teacher Education, 23*(2), 159-183.

Arya, P., Christ, T., & Chiu, M. M. (2016). Video use in teacher education: A survey of teacher-educators' practices across disciplines. *Journal of Computing in Higher Education*, *28*(2), 261-300.

Jenkins, M., Browne, T., Walker, R., & Hewitt, R. (2011) The development of technology enhanced learning: Findings from a 2008 survey of UK higher education institutions. *Interactive Learning Environments*, *19*(5), 447-465.

Kearney, E. (2015). A high-leverage teaching practice: Leading an open-ended classroom discussion. *Foreign Language Annals*, *48*(1), 100-123.