

Information for the May 16, 2014 TeachingWorks Journal Club Meeting

We will discuss the following two articles in this meeting:

1. **Fulmer, S.M. and J.C. Turner (2014). "The perception and implementation of challenging instruction by middle school teachers: Overcoming pressures from students." The Elementary School Journal 114(3): 303-326.**

2. **Teemant, A., Leland, C., and B. Berghoff (2014). "Development and validation of a measure of Critical Stance for instructional coaching." Teaching and Teacher Education 39: 136-147.**

In addition, bibliographic information is below for other relevant articles published in the following journals between February 1, 2014 and April 15, 2014.¹

Journal of Teacher Education

American Educational Research Journal

Elementary School Journal

Journal of Curriculum Studies

Teachers College Record

Educational Evaluation and Policy Analysis

Teaching and Teacher Education

Journal of Education for Teaching: International Research and Pedagogy

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Askill-Williams, H. and C. Cefai (2014). "Australian and Maltese teachers' perspectives about their capabilities for mental health promotion in school settings." Teaching and Teacher Education 40: 61-72.

Policy makers identify schools as settings for promoting students' positive mental health. However, mental health promotion is not typically addressed in pre- or in-service teacher education. This paper reports 1029 Australian and Maltese teachers' perspectives about their capabilities for mental health promotion. Although participants reported favourable attitudes, many indicated concerns about capabilities such as Knowledge, Parenting Support and Self-efficacy. Multilevel modelling showed differences between county, gender and year level, but not between years of teaching experience. Curriculum initiatives for mental health promotion require opportunities for teachers to build their capabilities in this relatively new domain of school and teacher responsibility.

Avraamidou, L. (2014). "Tracing a beginning elementary teacher's development of identity for science teaching." Journal of Teacher Education 65(3): 223-240.

The purpose of this case study was to examine a beginning elementary teacher's development of identity for science teaching from her first year at university, her field experience, and through her first year of teaching. Several kinds of data were collected over a period of 5 years through different sources: interviews, journal entries, drawing assignments, biographical assignments, lesson plans, and classroom observations. Grounded within a combined theoretical framework of identity and narrative, these data were analyzed by means of open coding techniques. The findings of the data analysis are presented under the following four main themes—(a) discourse identity: embracing and enacting scientific inquiry; (b) affinity identity: the impact of relationships

¹ For the May 16, 2014, TeachingWorks journal club we considered the following journals: *Journal of Teacher Education* (May/June 2014, 65(3)); *American Educational Research Journal* (February 2014, 51(1); April 2014, 51(2)); *Elementary School Journal* (March 2014, 114(3)); *Journal of Curriculum Studies* (no new issues since last meeting: 2014, 46(1); 2014 46(2)); *Teachers College Record* (116(3), 116(4)); *Educational Evaluation and Policy Analysis* (no new issues since last meeting: March 2014, 36(1)); *Teaching and Teacher Education* (April 2014, 39; May 2014, 40); *Journal of Education for Teaching: International Research and Pedagogy* (no new issues since last meeting: 2014, 40(1); 2014, 40(2)).



and science learning experiences; (c) nature identity: women in science; and (d) institution identity: the role of the context. The findings are summarized in three main assertions, which are discussed alongside a set of implications for research and teacher preparation.

Bailey, N.M. and E.M. Van Harken (2014). "Visual images as tools of teacher inquiry." Journal of Teacher Education 65(3): 241-260.

As aspiring professionals, pre-service teachers must become good consumers of educational research as well as competent researchers who can use tools of inquiry to improve their practice and conduct their own educational research. Many, however, resist learning research skills or find difficulties in doing so. This article presents ways in which learning in a graduate research class was prompted by methods of multimodal analysis and composition. The graduate-level teacher candidates in the class were taught, in particular, to use visual images as analytical and generative tools, and in doing so, they came to learn about the research process and their role as researchers. Moreover, working with visual images allowed the pre-service teachers increasing clarity in observations and interpretations of what they were seeing in classrooms where they were observing. By using visual images, teacher candidates seemed to arrive at theoretical insights that were possibly predictive of future, productive classroom practices.

Bronkhorst, L.H., Koster, B., Meijer, P.C., Woldman, N., and J.D. Vermunt (2014). "Exploring student teachers' resistance to teacher education pedagogies." Teaching and Teacher Education 40: 73-82.

Student teachers' resistance to teacher education is often understood as a lack of quality of the student teacher and/or the internship, and is expected to impede learning. In this study we suggest that resistance is interactive in nature, and can potentially have constructive outcomes. We engaged in a cross-case analysis of the resistance of two student teachers in a year-long teacher education program. Our results draw attention to diverse ways in which student teachers can engage in resistance, and to ways in which educators can support students in exploiting their resistance to benefit their learning.

Bullough, R.V. (2014). "Toward reconstructing the narrative of teacher education: A rhetorical analysis of preparing teachers." Journal of Teacher Education 65(3): 185-194.

Drawing on insights from literary critic and theorist Kenneth Burke, this rhetorical analysis of *Preparing Teachers* (2010), a publication of the National Research Council, reveals then critiques' key assumptions that are shaping policies and current reform efforts in teacher education, including changes in U.S. teacher accreditation. Connections are made between these assumptions and the development and influence of scientism in teacher education, and elements of an alternative future are explored.

Castro-Villarreal, F., Rodriguez, B.J., and S. Moore (2014). "Teachers' perceptions and attitudes about Response to Intervention (RTI) in their schools: A qualitative analysis." Teaching and Teacher Education 40: 104-112.

As Response to Intervention (RTI) models are increasingly implemented in United States' schools, it is important to consider the perceptions of those directly involved. The current study assessed teachers' perceptions of RTI and utilized qualitative methodology and a computer-based text search program to explore teachers' perceptions of RTI. Constant comparison analysis yielded four emergent themes related to teacher perception of RTI: (a) overall understanding of RTI, (b) teachers' perceptions of barriers to RTI in their schools, (c) teachers' suggestions to improve RTI, and (d) teachers' suggestions for making paperwork more efficient. We conclude with implications for training and RTI implementation.

Ellis, V., McNicholl, J., Blake, A., and J. McNally (2014). "Academic work and proletarianisation: A study of higher education-based teacher educators." Teaching and Teacher Education 40: 33-43.

This article reports on a one year, mixed methods study of 13 teacher educators at work in English and Scottish higher education institutions. Framed by cultural-historical activity theory, itself a development of a Marxian analysis of political economy, the research shows how, under conditions of academic capitalism, these teacher educators were denied opportunities to



accumulate capital (e.g. research publications, grants) and were proletarianised. The reasons for this stratification were complex but two factors were significant: first, the importance of maintaining relationships with schools in the name of 'partnership' teacher education; and, second, the historical cultures of teacher education in HE.

Fulmer, S.M. and J.C. Turner (2014). "The perception and implementation of challenging instruction by middle school teachers: Overcoming pressures from students." The Elementary School Journal 114(3): 303-326.

Current education policy and reform advocate for increasing the level of challenge in K–12 classrooms in order to maximize students' learning and academic success. This study examined middle school teachers' views about implementing challenging instruction while participating in a whole-school professional development initiative. A grounded theory analysis revealed teachers' feelings about challenge, the pressures that affected their decision to implement challenging instruction, and teachers' use of instructional practices to challenge students. Classroom observations were also analyzed to explore whether teachers' comments were related to differences in their use of challenging instruction. Teachers perceived 19 different pressures related to implementing challenging instruction, with pressures from students the most common across all subject areas. Some teachers were able to resolve pressures from students by having conversations with students about challenge, providing emotional and motivational support, scaffolding students' thinking, and increasing student autonomy. Implications for teachers' practice and professional development are discussed.

Gareis, C.R. and L.W. Grant (2014). "The efficacy of training cooperating teachers." Teaching and Teacher Education 39: 77-88.

This study investigated outcomes of a clinical faculty training program designed to prepare cooperating teachers for supervising pre-service teachers. Drawing on multiple data sources from more than a decade of implementation, researchers investigated initial outcomes of the program for cooperating teachers, student teachers, and new teachers. Findings suggest that the training resulted in a greater sense of efficacy for aspects of the role and may lead to more effective evaluation practices by clinical faculty and to stronger performances by student teachers. The lack of other significant results may have implications for policies related to the evaluation of teacher preparation programs.

Golombek, P. and M. Doran (2014). "Unifying cognition, emotion, and activity in language teacher professional development." Teaching and Teacher Education 39: 102-111.

Emotions in the learning-to-teach experience are often ignored or downplayed by teacher educators. Using content and discourse analysis of a novice language teacher's journals, we demonstrate that the pervasive emotional content, reflecting individual teacher's perezhivanie, is a motivated, structural component of teachers' processes of cognitive development. Emotional content indexes dissonance between the ideal and reality, offering potential growth points. We apply a SCOBA of language teacher learning that unifies the dynamic, dialectical relationship among emotion, cognition, and activity, in order to orient teacher educators in mediating novice language teachers' professional development responsively.

Goroizidis, G. and A.G. Papaioannou (2014). "Teachers' motivation to participate in training and to implement innovations." Teaching and Teacher Education 39: 1-11.

Based on Self-determination theory, a mixed method design was used to explore 218 teachers' motivation and intentions regarding participation in training and teaching of an innovative academic subject (i.e., Research Project). Structural equation modeling revealed that autonomous motivation positively predicted teacher intentions to participate in relevant training and to implement innovation in the future, while controlled motivation did not. The findings imply that policy makers should encourage strategies that foster teacher autonomous motivation for promoting successful implementations of educational innovations.

Haigh, M. and F. Ell (2014). "Consensus and dissensus in mentor teachers' judgments of readiness to teach." Teaching and Teacher Education 40: 10-21.

Deciding whether a teacher candidate is ready to teach is a significant judgment about which little is known. In this study, Social Judgment Theory's lens model is used to analyse grade decisions made by 18 primary school mentor teachers who were provided with four vignettes of fictional teacher candidates' practicum performance. Mentor teachers' grade decisions, and their reasoning, showed evidence of some consistency but also significant dissensus. We argue that such dissensus is inevitable in complex social decision-making and therefore needs to be used productively to help make more reliable judgments.

Hanuscin, D.L., Chang, Y.-W., Rebello, C., Sinha, S. and N. Muslu (2014). "The affordances of blogging as a practice to support ninth-grade science teachers' identity development as leaders." Journal of Teacher Education 65(3): 207-222.

Increasingly, teacher leadership is being recognized as an essential ingredient in education reforms; however, few teachers consider themselves leaders. Becoming a leader is not just acquiring knowledge and skills for leadership, but developing a new professional identity. As teachers become leaders, however, this identity might put them at risk with dominant school culture where norms of egalitarianism, isolation, and seniority persist. Luehmann emphasizes the value in offering safe spaces in which teachers can take risks as they "try on" new identities. We utilized an online environment to support ninth-grade science teachers in the development of common perspectives, commitments, and visions for teacher leadership as they implemented a new freshman physics curriculum. Our findings illustrate the potential benefits of blogging in terms of providing identity resources and opportunities for identity work. Specifically, by participating in pedagogical transactions, social interactions, and intellectual deliberations via blogs, teachers were supported in their efforts to be leaders in their classrooms, schools, and districts.

Janssen, F., Westbroek, H., and W. Doyle (2014). "The practical turn in teacher education: Designing a preparation sequence for core practice Frames." Journal of Teacher Education 65(3): 195-206.

Amid calls for more practice-based teacher education, this article presents a concrete illustration of a practice-based bridging strategy for preparing high school biology teachers to enact open-inquiry labs. Open-inquiry labs were considered a core practice frame that served as a context for identifying core practices and for giving coherence to separate components of the approach to labs. A bridging model was developed in which the teaching practices, understandings, and intentions of 31 biology student teachers were elicited with respect to their current lab segments, and these were compared with the concrete segments of the core practice frame. From this analysis, a progression was developed to support prospective teachers in moving from existing conceptions of appropriate practice to a realization of the new practice frame as a better way to achieve valued goals.

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

Reflection is a cornerstone of most teacher education programs, but common practices have long been individualistic and this has become increasingly evident in an era when young people are participating in online cultures more than ever. Informal participation in digital affinity spaces could provide insights for more formal learning environments. We encouraged collaborative reflection among 77 middle/secondary pre-service teachers using the closed social networking site Edmodo. While there were obstacles and ambiguities, findings indicated that our pre-service teachers found the site highly usable, appreciated the choice and influence afforded them through the medium, and grew as teacher-candidates from peer-to-peer interactions.



Lavigne, A.L. (2014). "Beginning teachers who stay: Beliefs about students." Teaching and Teacher Education 39: 31-43.

Beliefs serve as an adaptation that helps teachers organize their teaching world. Little is known, however, about how beliefs change and serve to help retain and sustain teachers, particularly for beginning teachers who are most likely to leave teaching. This study explores teachers' beliefs about students in the US (N = 67) and if these beliefs change during the first five years of teaching. Results indicate that teachers hold beliefs about students that capture pride and participation. Over time, these beliefs become more positive. Implications for teacher education and policy are discussed.

Mtika, P., Robson, D., and R. Fitzpatrick (2014). "Joint observation of student teaching and related tripartite dialogue during field experience: Partner perspectives." Teaching and Teacher Education 39: 66-76.

This article explores joint observation implemented as part of a partnership between schools and a teacher education institution during field experience (practicum) from the perspectives of student teachers, supporter (cooperating) teachers and tutors (university teacher educators). Joint observation comprising the viewing of student teacher practice in the classroom context by supporter teacher and tutor, and related tripartite dialogue, were implemented with a view to strengthening such collaborative partnership. In this exploratory study, qualitative and quantitative data were collected using semi-structured interviews and questionnaires. Findings identified the benefits and challenges of joint observation. Implications of the study are discussed.

Peck, C.A. and M. McDonald (2014). "What Is a Culture of Evidence? How Do You Get One? And ... Should You Want One?" Teachers College Record 116(3).

Background/Context: Contemporary state and national policy rhetoric reflects increased press for "evidence-based" decision making within programs of teacher education, including admonitions that programs develop a "culture of evidence" in making decisions regarding policy and practice. Recent case study reports suggest that evidence-based decision making in teacher education involves far more than access to data—including a complex interplay of motivational, technical, and organizational factors.

Purpose: In this paper we use a framework derived from Cultural Historical Activity Theory to describe changes in organizational practice within two teacher education programs as they began to use new sources of outcome data to make decisions about program design, curriculum and instruction.

Research Design: We use a retrospective case study approach, drawing on interviews, observations and documents collected in two university programs undergoing evidence-based renewal.

Conclusions: We argue for the value of a CHAT perspective as a tool for clarifying linkages between the highly abstract and rhetorically charged concept of a "culture of evidence" and concrete organizational practices in teacher education. We conclude that the meaning of a "culture of evidence" depends in large measure on the motivations underlying its development.

Rienties, B. and I. Kinchin (2014). "Understanding (in)formal learning in an academic development programme: A social network perspective." Teaching and Teacher Education 39: 123-135.

Most professional development programmes provide teachers with formal and informal social networks, but limited empirical evidence is available to describe to what extent teachers build internal (within their programme) and external (with colleagues not involved in the programme) social learning relations. We triangulated Social Network Analysis with qualitative free exercise responses. Participants developed on average 4.00 internal and 3.63 external relations, and discussed teaching 128 times per year with externals. MRQAP modelling indicates group division, department, and friendships predicted learning ties. These findings indicate that research on impact of teacher education should widen its focus beyond the formal programme boundaries.



Teemant, A., Leland, C., and B. Berghoff (2014). "Development and validation of a measure of Critical Stance for instructional coaching." *Teaching and Teacher Education* 39: 136-147.

This study presents supporting correlational evidence of inter-rater reliability and validity for a new scale called Critical Stance, which translates critical pedagogy into measurable teacher actions for instructional coaching. Then using a quasi-experimental design (N = 36), this study examines the effects of an instructional coaching model called the Six Standards, defined by Critical Stance and five other sociocultural principles of learning. Coached teachers demonstrated statistically significant growth in use of the Six Standards in comparison to a control group. Critical Stance, however, was the most difficult standard for teachers to implement. Implications for increasing teacher use of critical pedagogy are addressed.

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Abstract:

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Summary prepared by Nancy Songer and Michelle Reicher Newstadt

Purpose

The authors describe the purpose as follows: "Specifically, this paper theorizes, describes, and evaluates an effort to translate critical pedagogy (Freire, 1994) into comprehensible, intentional, and measurable teacher practice" (p.137). The research study and the paper were designed to address two gaps in the literature. First, the authors state that, "Despite its theoretical importance, critical pedagogy has not yet realized broad influence on teachers or schools serving minority populations" (p. 139). In addition, the authors employ quantitative research methods in recognition of the existing body of literature using qualitative research approaches to investigate the application of critical perspectives for teaching diverse learners but the dearth of quantitative evidence.

Literature Review

The literature review includes foundational research in these primary areas:

a. Sociocultural theory as pedagogy. This section reviews literature by Vygotsky (1978) and others emphasizing social cognition and cognitive apprenticeship (e.g., Rogoff, 1990) as the foundation for models of classroom pedagogy. In particular, the paper describes one pedagogical model, called the *Five Standards for Effective Pedagogy* (Tharp, Estrada, Dalton, & Yamauchi, 2000; Villegas & Lucas, 2007). This model builds from sociocultural principles towards the establishment of five sociocultural principles of learning. These are: (a) Joint productive activity, (b) Language and literacy development, (c) Contextualization, (d) Challenging activities, (e) Instructional conversation (Tharp et al, 2000). When manifested as a pedagogical approach, the *Five Standards* utilize small group activity centers and activities that are specifically designed to employ at least three of the above standards at one time in each activity.

This study also builds from previous validity evaluations of coaching instruments. Previous studies demonstrated that the *Five Standards Instructional Coaching Model* realized sustained teacher practices changes after a year of coaching (Teemant, 2013), however teachers who were coached underestimated the significance of contextualization.

b. Critical theory as pedagogy. This section reviews literature emphasizing the inextricable connection between individuals and society (McLaren, 2007) and the importance of the incorporation of critical theory in pedagogical approaches. The authors discuss the lack of influence of critical theory on pedagogical approaches (p. 139). This piece of the study intends to build from Freire's (1994) concept of "the 'banking concept of education' where teachers 'make deposits which students patiently receive, memorize and repeat' (p. 53)" (p. 139) towards a new pedagogical standard that includes teachers' and students' naming, critically discussing, and taking actions on their experiences and those of others.

Critical Stance is defined as a new (the sixth) Standard for Effective Pedagogy. It “is intended to be a measurable principle of learning explicitly demanding authentic dialog to promote learning in service of transformative civic engagement around social inequities” (p.139). This standard is defined as “Empower students to transform society’s inequities through democracy and civic engagement. The Enacting Level is: The teacher consciously engages learners in interrogating conventional wisdom and practices, reflecting upon ramifications, and seeking actively to transform inequities within their scope of influence in the classroom and larger community” (p. 140).

Research Questions

The study is defined by the following research questions:

- **RQ1.** Can inter-rater reliability be established for Critical Stance?
- **RQ2.** Is there an increase in coached teacher use of Critical Stance as a result of instructional coaching?
- **RQ3.** What pattern of teacher implementation of Critical Stance emerges in comparison to the Five Standards: Joint Productive Activity, Language/Literacy Development, Contextualization, Challenging Activities, and the Instructional Conversation?
- **RQ4.** To what degree is concurrent validity of Critical Stance established with the SPC sub-scales prior to and after instructional coaching?

In other words, the goal of the study is to validate the sixth standard, Critical Stance, and to determine whether teachers coached in Critical Stance: (a) improved their educational practice and (b) were more effective with diverse learners” (p. 141) than teachers not coached in these techniques.

Research Study

The research study had these stages:

1. Inter-rater reliability was established through the process of four raters using the Definition and Content-area Examples of the Critical Stance Scale (handout) on fifteen written classroom scenarios and achieving a coefficient of reliability of 0.99 (p. 143).
2. To determine whether there was an increase in coached teachers’ use of Critical Stance and patterns of implementation (research questions 2 and 3), investigators collected five episodes of classroom observations, three prior to the coaching intervention and two after a year of coaching, from coached and control teachers and coded these using the Standards rubric.

Subjects, Instruments and Analysis

The study was conducted with 36 urban elementary teachers over 2 years. Half of the teachers were in the Coached condition, the other half were control teachers. Coached teachers were provided with seven coaching sessions over a 12-month period. The Five Standards were measured with Standards Performance Continuum (SPC), 5 levels rubric (p. 141). The Critical Stance standard was measured with SPC Plus coding rubric (Six Standard Model; p. 142). The analyses consisted of gathering the frequencies, means, standard deviations for Six Standards and Total scores, ANOVAs, Cronbach’s alpha for inter-rater reliability, and correlations among Six Standards and Total scores for concurrent validity.

Results

The results demonstrate the following outcomes:

1. At the pre-intervention point, all of the elementary teachers were utilizing traditional pedagogical approaches with “very little variety” (p. 143). Teachers were primarily between the “not observed” and “emerging” levels of the SPC Plus coding rubric. In addition, “on average, Critical Stance and the Instructional Conversation were the least observed standards during pre-intervention observations” (p.144).
2. At the post-intervention point, the coached teachers showed a statistically significant increase in the use of the Critical Stance approaches in contrast to the control teachers ($p = .05$). On average, coached teachers were between the “emerging” and “developing” levels on the coding rubric. On balance, “only 4 of the 21 coached teachers reached the highest level ‘enacting’ for Critical Stance after seven coaching sessions” (p. 144).



3. The patterns observed for the use of Critical Stance were an increase overall in the use of the Six Standards for coached teachers. However, Instructional Conversation and Critical Stance were the toughest standards to implement.
4. Research question 4 was focused on determining the ability to which the new standard, Critical Stance, had Concurrent Validity with the other five standards. Concurrent Validity is defined as the ability for two measures that are implemented at the same time to provide similar predictive results relative to each other. This approach is used to establish the validity of a new measure (here the Critical Stance standard) relative to another measure (here the Five Standards) that had previously demonstrated strong validity evidence. The results presented here demonstrated evidence for a strong concurrent validity argument for Critical Stance as follows: “Critical Stance was positively and significantly related to Language/Literacy and Challenging Activities. Critical Stance was negatively and significantly correlated to Joint Productive Activity. Contextualization, the Instructional Conversation and Total Score were not significantly related to Critical Stance (p. 144).

Discussion and Implications

The paper concludes with the following discussion points:

“The large, positive, and statistically significant correlations to Tharp et al.’s (2000) established sociocultural principles of learning--or Five Standards--provide evidence of the concurrent validity of Critical Stance (RQ4). This criterion-related evidence supports the interpretation that teacher use of Critical Stance is correlated to teacher use of other sociocultural principles of learning” (p.145).

The study demonstrated strong quasi-experimental results supporting the statement that instructional coaching can result in teachers’ significant growth in the use of Critical Stance techniques. On balance, the data also demonstrated that Critical Stance was the most difficult of the six standards to implement. Even after seven coaching sessions, several of the coached teachers still did not reach the highest levels on the coding rubric.

Questions/Considerations

1. What important understandings, if any, do quantitative studies such as this one contribute to the existing qualitative literature on evaluating critical perspectives for teaching diverse learners?
2. The financial and time investment in instructional coaching programs such as Critical Stance combined with the Five Standards seems quite high. Is there a danger that these practices might become over simplified and/or adopted in significant ways if such an investment is not feasible? If so, how could these dangers be addressed?

Fulmer, S.M. and J.C. Turner (2014). "The perception and implementation of challenging instruction by middle school teachers: Overcoming pressures from students." The Elementary School Journal 114(3): 303-326.

Abstract:

Current education policy and reform advocate for increasing the level of challenge in K–12 classrooms in order to maximize students' learning and academic success. This study examined middle school teachers' views about implementing challenging instruction while participating in a whole-school professional development initiative. A grounded theory analysis revealed teachers' feelings about challenge, the pressures that affected their decision to implement challenging instruction, and teachers' use of instructional practices to challenge students. Classroom observations were also analyzed to explore whether teachers' comments were related to differences in their use of challenging instruction. Teachers perceived 19 different pressures related to implementing challenging instruction, with pressures from students the most common across all subject areas. Some teachers were able to resolve pressures from students by having conversations with students about challenge, providing emotional and motivational support, scaffolding students' thinking, and increasing student autonomy. Implications for teachers' practice and professional development are discussed.

Summary prepared by Nancy Songer and Michelle Reicher Newstadt

Purpose—The purpose of the study is twofold: (1) "To investigate teachers' perceptions of challenge as an instructional goal" (p. 304), and (2) To examine "the factors that influenced middle school teachers' decisions to use practices characteristic of challenging instruction" (p. 304).

Theoretical Framework and Background

According to the authors, "challenging instruction encourages students to think conceptually and analytically, rather than procedurally" (p. 304); it "probes higher-level thinking in classroom tasks" (p. 304). For example, there are interactive discussions in the classroom that encourage students to explain and justify answers. These challenges posed by the teacher must be perceived as attainable because students need to be actively engaged and not be discouraged (it must be within a student's zone of proximal development).

Challenging Instruction in US schools:

- Challenging instruction supported/encouraged, but low challenge tasks found/characteristic across all subject areas. Examples below:
 - Social studies—facts, students gather and recite information (Levstik, 2008; Saye, 2011)
 - Science—correct answers, lower level compared to student understanding (Weiss, Pasley, Smith, Banilower, & Heck, 2003)
 - Reading—skills based; less focused on comprehension (Snow, 2002)
 - MS Math—cognitively undemanding (Cogan, Schmidt, & Wiley, 2001; Hiebert et al., 2005)

Pressures perceived by teachers:

- From above (e.g. high-stakes testing and mandated curriculum→detrimental to use of challenging instruction because teachers lack autonomy in the classroom). Teachers seek more control when evaluated by administrators and colleagues (Leroy, Bressox, Sarrazin, & Trouilloud, 2007; Pelletier et al., 2002; Taylor et al., 2009) and feel responsibility for student performance on testing (Pelletier et al., 2002). The pressures from above can result in less challenging instruction tasks in the classroom.
- *From within* (e.g. self-efficacy, internal motivation, beliefs about instruction and learning); low self-efficacy→less likely to implement new instructional approach (Gregoire, 2003).
- *From below* (e.g. less motivated, disengaged students, perception of incapable students→teacher control (Newmann, 1992; Weinstein et al., 1995; Skinner & Belmont, 1993)).

Research Questions

1. “What concerns do teachers express when they are encouraged to use strategies related to challenging instruction” (p. 308)?
2. “How are these concerns resolved, such that teachers are able to successfully implement the strategies” (p. 308)?

Data Sources/Methods

Middle school professional development focused on practices to better engage the students.
Grounded theory analysis of teacher comments and classroom observations from two teachers

Participants: n=34 (23 females; n=10 language arts, n=6 mathematics, n=6 social studies, n=3 science, n=9 physical education, arts, and computers).

Data sources

September	Classroom Observations		
October	Workshops		
November	Classroom Observations	Subject-Area Meeting (<i>Social Studies</i>)	Grade-Level Meetings (<i>6th, 7th, and 8th grade</i>)
December	Grade-Level Meetings (<i>6th & 7th grade</i>)		
January	Workshops	Subject-Area Meeting (<i>Math</i>)	
February	Subject-Area Meeting (<i>Science</i>)		Grade-Level Meetings (<i>6th, 7th, & 8th grade</i>)
March	Classroom Observations	Subject-Area Meeting (<i>Social Studies</i>)	

Figure 1. Timetable of workshops, meetings, grade-level meetings, and classroom observations
Note: This figure was taken from p. 309 of the document.

Strategies to increase challenging instruction discussed in the three hour workshops included: (a) Focus on learning and thinking rather than answers, (b) Support and scaffold students’ efforts, (c) Increase length and quality of student-student and teacher-student instructions, and (d) Received additional subject specific supports, at end of workshop teachers placed in subject-specific areas to implement approaches in lesson plans.

Coding: Qualitative coding of 16 audiotaped meetings, open coding and axial coding.

Classroom observations: Two teachers from each area → ultimately analyzed 2 math teachers at three time points. Four Practices coded in analysis: (a) opportunities for cognitive autonomy, (b) press for understanding, (c) student construction of knowledge, (d) opportunities to work on content.

Results and Discussion

Perceived Pressures: “Teachers reported 19 different pressures that impeded their use of strategies to challenge students. The number of different pressures reported by each teacher ranged from 0 to 12 ($M = 4.50, SD = 3.77$)” (p.11).

- Differences by subject matter: Math teachers—reported the most overall pressure out of all subject matter teachers; reported more pressures from above; more likely to discount value and practicality of challenging instruction.
- Pressures from above: time-constraints, curriculum, and standardized testing.
- Pressures from within: low self-efficacy with pedagogy, need for control, perception that challenging instruction would undermine achievement and learning.
- Pressures from below (mentioned by 82% of teachers): students’ lack of effort, resistance to challenge, and achievement level.

Discussion: In this study, pressures from below are most commonly reported followed by pressures from above and pressures from within (the least reported).

- Impacts from below were reported at a higher frequency than in other studies that explore perceived pressures related to challenging instructional tasks. In other studies, there is a greater focus on pressures from above with increased emphasis on high-stakes testing and student performance. In this study, several possibilities for more findings of pressures from below include: (1) teachers spontaneous reporting of pressure and more focused discussion of pressures related to challenging instruction in the professional development (2) teachers ability to identify specific student pressures (e.g. lack of interest and resistance to challenge).
- Resolving Pressures from Below: (a) providing emotional or motivational support, (b) scaffolding student's responses, (c) increasing student autonomy, and (4) initiating whole class discussion
- Classroom Observation of Two Teachers (CI and AH).
 - AH→procedural, correct or incorrect responses, students did not need to explain thinking about how and why, gave students answer and/or did not give students time to respond to an open-ended question. AH used more traditional math teaching approaches—procedural problem solving with a correct answer (Thompson, 1992). AH did not implement challenging instruction in the classroom.
 - CI→ group work that engaged students thinking and asked questions with unique answers, discussed thinking and students explained why/how they got to an answer, emphasized critical thinking skills/practices. “Her willingness to attempt new strategies may have also been due, in part, to higher efficacy and a deeper understanding of mathematics (Gregoire, 2003; Santagata, 2009; Stipek et al., 2001).
 - Observations of two teachers aligned with how these two teachers discussed challenging instruction in the workshops
 - Based on the observations of the two math teachers, the authors discuss the potential importance of teacher self-efficacy, knowledge of the curriculum, comfort and autonomy in making instructional and curricular decisions that do not directly align with the textbook as potential factors that might encourage greater use of challenging instruction in the classroom.

Implications for Teachers' Practices: “First, successful teachers encouraged students' learning and motivation through supportive interactions with their students. In particular, teachers mentioned using modeling and scaffolding to facilitate students' understanding and guide students through challenges (Vygotsky, 1978; Wood et al., 1976)... The second reason why some teachers were successful in implementing challenging instruction was likely due to their own motivation. Teachers who reported implementing challenging instruction, similar to teachers who did not, perceived various pressures from above, within, and below related to challenging their students” (p.320)

Implications for Professional Development: Professional development was not voluntary, strategies given were generic to encourage challenging instruction, and teacher personal experience might go against the information presented about benefits of practices that encourage challenging instruction. It is important for those developing and implementing professional development to address pressures from below. Addressing pressures from below can help teachers develop instructional strategies that encourage student engagement and motivation,

Questions/Considerations

1. Both papers discuss the design of professional development that draws from the work of Vygotsky. How do the two studies draw on this work in similar and different ways?
2. This paper provides results on the different ways teachers resolved pressures from below. How, if at all, are any of these related to your understanding of Vygotsky's ideas?
3. Which of the two papers presented stronger results? What features of the presentation made those study results more convincing?