Cognitive/emotional dissonance as growth points in learning to teach

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Abstract

While teaching has long been considered an emotional practice with teachers’ daily practices recognized as being permeated with emotional meanings and influences, as teacher educators we are often perplexed by how best to respond to novice teachers’ expressions of emotion. In this study, we document the practices that characterize our work as teacher educators in assisting novice teachers in the processes of learning-to-teach. Specifically, we explore how instances of cognitive/emotional dissonance that often emerge in these practices signal growth points in novice teacher development. The empirical data come from a teacher education practice designed to create multiple opportunities for novice teachers to participate in a range of authentic activities associated with the teaching of English as a second language (ESL). The findings bring to the surface the inherent challenges of both recognizing and capitalizing on instances of cognitive/emotional dissonance as growth points in novice teacher development.

Keywords: emotions; novice teacher learning; sociocultural theory; teacher cognition; teacher education

Introduction

Teaching has long been considered an emotional practice (Denzin, 1984), with teachers’ daily practices (i.e., lesson planning, managing instruction,
interacting with students, colleagues, and parents, etc.) recognized as permeated with emotional meanings and influences (Hargraves, 1998, 2001). Educational researchers who embrace the learning of teaching as involving both emotional work (evoking, suppressing, shaping of emotions) and emotional labor (the outcome of that work, i.e., managing one's emotions) emphasize the importance of helping novice teachers navigate the emotional practices involved in the learning of teaching (Flores and Day, 2006; Oplatka, 2007; Zembylas, 2005). Yet, concrete suggestions for how best to accomplish this tend to be somewhat ephemeral and often separated from the cognitive work of developing either subject matter content or pedagogical expertise. Suggestions typically focus on morale building, empathic mentoring and supervision, or creating safe spaces where novice teachers can reflect on and share their emotions with others (Meyer, 2009; O’Conner, 2008; Schutz and Zembylas, 2009).

While we acknowledge the importance of providing emotional support to novice teachers in the ways suggested above, as teacher educators, we are often perplexed by how to respond to novice teachers’ expressions of emotion in ways that support productive teacher development. We agree with Van Huizen et al. (2005) and Edwards et al. (2009), who argued that teacher educators need to both acknowledge and utilize the emotional experiences of novice teachers; however, we contend that recognizing critical moments of emotive expression and strategically responding to them in ways that support productive novice teacher development is extremely challenging. To address this challenge, we ground this study of our own teacher education practices in the sociocultural dialectic unity of cognition and emotion (Vygotsky, 1987) and argue that the emotional dimensions of learning-to-teach, when conceptualized as a resource rather than a distraction, are critical to novice teacher development.

The empirical data investigated here are drawn from a unique teacher education practice designed to create multiple opportunities for novice teachers to participate in a range of authentic activities associated with the teaching of English as a second language (ESL). Embedded in a 15-week university-level TESOL methodology course, the extended team-teaching project (Johnson and Arshavskaya, 2011; Johnson and Dellagenlo, 2013) supports novice teachers through multiple attempts at materializing (lesson planning) and enacting (teaching) their teaching practices with the ultimate goal of moving them toward greater self-regulation of theoretically and pedagogically sound instructional practices for English language learners. The activities embedded in this project create opportunities for novice teachers to externalize their emotions during this series of initial learning-to-teach experiences. In line with calls for ‘a more developed and politically viable theoretic base in order
to argue for enhanced attention to emotion in teacher education, in teacher development, and in empirical research on teaching and learning’ (DiPardo and Potter, 2003: 337) the goals of this study are three-fold: (1) to identify instances of cognitive/emotional dissonance that arise in initial learning-to-teach experiences; (2) to examine our own practices as teacher educators when faced with novice teachers’ expressions of cognitive/emotional dissonance; and (3) to trace the mediation of cognitive/emotional dissonance as growth points (explained below) in novice teacher development.

The dialectic unity of cognition and emotion

In most teacher education programs, the learning of teaching is viewed as a cognitive enterprise, one in which emotions may permeate, but in which expressions of emotion have no officially recognized place in learning-to-teach. This separation of cognition and emotion is not new in the study of human consciousness (Nussbaum, 2001; Ratner, 2000; Schutz and DeCuir, 2002; Solomon, 1993). Beginning with Socrates’ pursuit of rational thought up to Descartes and the Age of Reason and into the Enlightenment, the influence of Rationalism on Western thinking has long set cognition and emotion as separate from one another and often placed them in conflict. It is against this socio-historical backdrop that cognition is typically prized while emotion is often minimized (see Swain, 2013 for a similar discussion with regard to SLA).

In our work as teacher educators we find Vygotskian sociocultural theory to be a powerful theory of mind through which to understand the emotional dimensions of learning-to-teach. Vygotsky (1987) offered a significantly different understanding of the relationship between cognition and emotion than is found in Western Rationalism. He argued against the separation of intellect and affect into distinct fields of study and proposed that, ‘every idea contains some remnant of the individual’s affective relationship to that aspect of reality which it represents’ (p. 50). In his argument for the inseparability of mind and body, thought and emotion, Vygotsky (1987) claimed that, ‘behind every thought there is an affective-volitional tendency, which holds the answer to the last “why” in the analysis of thinking. A true and full understanding of another’s thought is possible only when we understand its affective-volitional basis’ (p. 252). Simply put, to fully understand cognition we must understand emotion and acknowledge the dialectic unity between the two.

To further explicate the dialectic unity of cognition and emotion, we invoke the Russian term perezhivanie, used extensively throughout Vygotsky’s writings, to capture the subjective significance of lived experiences that contribute to the development of one’s personality; especially the emotional and visceral impact of lived experiences on the ‘prism through which all future experiences
are refracted’ (van de Veer and Valsiner, 1994: 336). According to Vygotsky (1987), ‘the emotional experience [perezhivanie] arising from any situation or from any aspect of his [sic] environment determines what kind of influence this situation or this environment will have on the child’ (p. 141). Since individuals will most certainly experience the same event quite differently, one’s perezhivanie is not the experience itself, but how that experience is interpreted and understood by the individual. In other words, people have distinctively different perezhivanie, as their reactions are based on the specifics of their past experiences.

Three decades of research on teacher cognition indicates that novice teachers draw heavily on their lived experiences as learners in classrooms (Borg, 2006; Freeman, 2002). However from a sociocultural theoretical perspective, it is not merely what teachers saw and did as learners that influences their thinking about teaching and learning, it is the emotional experiences [perezhivanie] associated with their schooling histories that play a central role in understanding teaching activity. Because of this fact, even teachers who have similar schooling histories may assign vastly different emotional meanings to those histories. For example, one teacher might express deep admiration and respect for a strict teacher who presented material through lecture, while another might perceive that same strict teacher as authoritarian. For teacher educators, establishing a sense of novice teachers’ perezhivanie, both past (e.g., Lortie (1975) apprenticeship of observation) and present (e.g., how they are experiencing the activities of teacher education) is essential in order to provide mediation that supports productive teacher development.

While engaged in the practices of teacher education, teacher educators and novice teachers are typically involved in constructing what Vygotsky (1978) defined as a zone of proximal development (ZPD). Characterized as an arena of potentiality, the ZPD represents a metaphoric space where engagement in social interaction (activity) exposes what an individual might be able to do with assistance; in other words, one’s potential versus what one can do on one’s own (Lantolf and Thorne, 2006). Since the bulk of what is done in teacher education is to provide assistance to novice teachers so that they can engage in the activity of teaching in ways that they are not yet able to do on their own, strategic mediation directed at novice teachers’ potential development is essential. However, because the ZPD is comprised of unstable maturing cognitive functions, strategic mediation may not necessarily give rise to a smooth, even, or inevitable process of development (Wertsch, 2007). Given the uneven nature of development, teacher educators can expect that novice teachers will experience cognitive/emotional struggle as they are learning-to-teach. While some Vygotskian scholars find that negative emotions tend to compromise individual development during ZPD activity (Mahn and John-Steiner, 2002) others
view contradictions as essential to the process of development and see the resolution of contradictions as essential to the actualization of development (Cole and Engestrom, 1993). Likewise, if an individual becomes consciously aware of the sources of such contradictions, this awareness can turn into an important force for cognitive development (Gonzalez Ray, 1999). Numerous studies in language teacher education support Vygotsky’s (1987) notion that cognitive/emotional dissonance acts as a catalyst that can, with the right mediation, support teacher development (Childs, 2011; DiPardo and Potter, 2003; Golombek and Johnson, 2004; Golombek and Doran, 2013; Kubanyiova, 2012; Reis, 2011). The challenge for teacher educators is to be attuned to critical instances of novice teacher cognitive/emotional dissonance and recognize these as growth points in novice teacher development.

**The cognition/emotion growth point**

To pursue this challenge, we borrow elements of McNeil’s (2005) theoretical construct of *growth point* since it not only helps elucidate Vygotsky’s (1987) dialectic unity of thought and language but because we have also found it to be useful for marking critical junctures in novice teacher development. For Vygotsky (1987), speech is not a matter of putting pre-existing thoughts into words. Instead ‘thought is restructured as it is transformed into speech. It is not expressed but completed in the word’ (p. 251). Thus, thoughts undergo continuous change during the process of speaking, which both shapes and is shaped by a speaker’s history, social interactive context, and agency. Based on Slobin’s (1987) original notion of *thinking-for-speaking*, or how speakers organize their thinking during acts of speaking, McNeill’s (2005) work on the ‘speech-gesture synchrony’ defines the *growth point* as the ‘minimal unit of an imagery-language dialectic’ that thus constitutes a particular starting point for a thought as it ‘comes into being’ (p. 104). Moreover, because it combines the two semiotic opposites of imagery and linguistic form, the *growth point* ‘creates a benign instability that fuels thought and speech’ and represents ‘a speaker’s efforts to construct meaning’ in a particular context and point in time (p. 104). For McNeil, the *growth point* in *thinking-for-speaking* represents what Vygotsky called the *psychological predicate*, providing a window into thinking as it arises in and is shaped by the activity of speaking (McNeil and Duncan, 2000).

While McNeil’s ‘imagery-language dialectic’ is manifested through gesture and speech, our work examines instances of the dialectic of cognition and emotion as it arises in the context of novice teachers learning-to-teach. Like McNeill, we see *growth points* as an instantiation of a dialectic ‘coming into being’ in specific contexts and can, with strategic mediation, fuel devel-
velopment. In our work, we posit *growth points* in the learning of teaching as coming into being when contradictions emerge between what a novice teacher envisions and the reality of what actually occurs while teaching; contradictions that can be inferred through teachers’ emotionally indexing language and behavior in such moments. Such contradictions create a sense of instability, or cognitive/emotional dissonance, that may be both mystifying and debilitating for novice teachers. In the face of such instability, novice teachers often turn inward, experience a crisis of confidence, and return to the sort of traditional monologic teaching that permeated their schooling histories. Moreover, novice teachers are typically unable to recognize what triggers moments of cognitive/emotional dissonance, and instead tend to blame their students or themselves. Thus, we operationalize the *growth point* as a moment or series of moments when novice teachers’ cognitive/emotional dissonance comes into being. And we argue that strategic mediation directed at the *cognition/emotion growth point* creates the potential for productive teacher development. Like McNeil we see the *growth point* as emergent, contingent, and thus mediation directed at the *growth point* cannot be predicted beforehand. It is dependent on the teacher educator’s ability to recognize and target novice teachers’ emergent needs as well as utilize their responses to that mediation and/or requests for additional support. Critical as well is enabling novice teachers to become consciously aware of the sources of their cognitive/emotional dissonance as this too can lead to productive teacher development.

In the study that follows we explore the emergence of a *cognition/emotion growth point* as a novice teacher participates in and attempts to make sense of a series of initial learning-to-teach experiences. We begin by describing the design of the teacher education practice, the participants who engaged in it, the team’s materialization of the ESL lesson plan, and the data collection and data analysis procedures employed. We then identify and analyze the *cognition/emotion growth point* that emerges for a teacher as the reality of the students’ participation in the lesson conflicts with her expectations. The strategic mediation directed at this *cognition/emotion growth point* and the effects of this mediation on the teacher’s (re)conceptualization of teaching are then examined. We close by considering implications for teacher educators.

**The study: Exploring cognition/emotion growth points in learning to teach**

**The extended team-teaching project**

The extended team-teaching project requires a team of three-to-four novice teachers to engage in a series of activities designed to prepare them to teach a 50–75-minute lesson in an actual ESL class. Initially, the team observes one
session of the ESL class in order to develop an understanding of the instructional setting, including required assignments and assessments, as well as the students’ L2 proficiency, goals, and motivation. For many novice teachers, this is their first entrée into the world of teaching ESL and their reactions are varied, but often emotionally charged. Many expect instruction to focus on the language itself (i.e., grammar, pronunciation, vocabulary) rather than language as constituted in subject matter content or as social practice (Gee, 1999; Halliday, 1985; Johnson, 2009). Some are intrigued, while others are intimidated by the vast array of languages and cultures represented in an ESL (versus English as a foreign language (EFL) or foreign language (FL)) instructional context.

During the lesson planning stage, the team has both face-to-face and virtual meetings with each other, the instructor of the ESL class, and the teacher educator as they co-construct a lesson plan. The content of the lesson plan reflects what is listed on the course syllabus for the day they are scheduled to teach. This often creates tension, as the team typically needs to negotiate their collective understanding of the subject matter content they are expected to teach and then materialize it in the form of a lesson plan. As is typical of novice teachers, the initial lesson plan is usually comprised of a set of procedures and/or activities but lacks a coherent conceptual understanding of the subject matter content to be taught.

The team then participates in a 1-hour video-recorded practice teach in which they teach their lesson in the TESL methodology course. The practice teach allows the team to not only enact the lesson but also to externalize their conceptualization of the lesson and thus lay it open for social mediation. This occurs as the teacher educator and fellow classmates regularly halt instruction in order to ask questions, provide feedback, and/or make suggestions. Moreover, since evaluative comments invariably creep into this activity, their classmates are prompted to focus on how they experienced the lesson as students, rather than what the team could or should have done. The dialogic interaction that emerges in this activity is instrumental in assisting the team as they re-conceptualize their lesson plan to better meet the instructional goals they had envisioned and to align their instructional activities with how their classmates experienced their lesson.

A week later the team teaches the redesigned lesson plan in the ESL class. During the actual teach the team typically makes many in-flight decisions as they realize that in the activity of actual teaching they need to alter and/or adjust their plans according to how the ESL students respond to and engage in their instructional activities. The teacher educator attends and video records the lesson but does not intervene.
Within 48 hours, the team participates in an audio-recorded *stimulated recall session* in which they watch and discuss the video recorded *actual teach* with the teacher educator. Team members are encouraged to stop the recording whenever they want to comment on the lesson. The teacher educator also stops the recording to ask questions, to allow the team to reflect on critical moments in the lesson, and to offer suggestions. Once again, this activity allows for extensive externalization of the team's thinking, and often of their emotional struggles and triumphs. More often than not, the team engages in a collective 'in-hind-sight' reconstruction of the lesson or articulates new insights about themselves as teachers and the activity of actually teaching. The *stimulated recall session* also creates opportunities for the teacher educator to provide mediation that is intentional and deliberate, with the goal of enabling the team to gain an expert's perspective on the subject matter content they taught and/or the instructional practices they were attempting to carry out in the lesson.

Finally, after receiving digital copies of the *practice teach*, the *actual teach*, and the *stimulated recall session* each team member is required to write a five-to-seven page reflection paper about the project, paying particular attention to what they have learned about themselves as teachers, about the activity of L2 teaching, and about this series of initial learning-to-teach experiences.

**The novice teachers**

A team of four novice teachers\(^1\) voluntarily granted access to data from their extended team-teaching project: two undergraduate students enrolled in a TESOL minor, Nan (print journalism) and Kate (religious studies), and two graduate students enrolled in an MA TESL program: Jess and Fred. All four took the TESL methodology course as a requirement of their program of study. Nan and Kate had no prior teaching experience and little exposure to international students. Both Jess and Fred had limited experience teaching EFL; Jess, in a six-week youth English language summer camp in Seoul, South Korea; and Fred, tutoring adults while stationed in Taipei, Taiwan with the US military.

**The teacher educators**

The first author of this paper was the lead teacher of the TESL methodology course and supervised the team throughout the extended team teaching project. The second author co-taught the TESL methodology course, but was not present during the actual teach or the stimulated recall session. In the data analysis sections, when we refer to 'the teacher educator' we are referring to the first author.
The lesson: Teaching the argumentative essay

The team was assigned to teach a 75-minute lesson in a freshman ESL composition course that focused on the rhetorical structure of an argumentative essay. They were expected to cover the discourse conventions of argument, counter-argument, and refutation, as well as the use of linguistic devices such as transition words and passive/active voice in argumentation.

Initially, the team struggled with selecting a topic within which to situate their lesson. In addition, they were unsure about how to present the generic textbook definitions of argument, counter-argument, and refutation. During the one-hour practice teach the team was able to enact the role of being the teacher, talk through their idealized instructional activities, and negotiate and collectively re-conceptualize the lesson. The teacher educator leading this team consistently and repeatedly pushed the team to focus on the rhetorical function of the discourse conventions and linguistic devices being taught rather than simply the procedures for carrying out the lesson, to situate examples of these conventions and devices in a culturally appropriate topic, and to create engagement activities where the ESL students could apply these as they drafted out their own argumentative essays.

For the actual teach, the team parsed out segments of the final version of the lesson plan. Fred began by asking the ESL students to write a thesis statement for their essays (previously assigned for homework) on an index card and set it aside. Kate oriented the students to the topic of the example argumentative essay they were about to read (essay title: To hear or not to hear: Cochlear Implants and the deaf culture). Nan presented sentence-level examples of an argument, a counter-argument, a refutation, and noted transition words that signaled counter-arguments and refutations from the Cochlear Implant essay. Jess passed out hard copies of the Cochlear Implant essay, segmented by paragraphs and numbered out-of-order, and asked the ESL students to read each paragraph and work in pairs to re-order the essay according to the two rhetorical organizational types given in the textbook. Jess then led a large group discussion in which the pairs reported on both how and why they had re-ordered the essay. Nan then asked the students to infer the semantic function of particular transition words as signals of a counter-argument in the re-ordered essay. Finally, Fred introduced active/passive voice by asking the students to rewrite their thesis statements in the active voice. For the final 15 minutes of the lesson the team circulated among the ESL students helping them formulate arguments and counter-arguments for their own argumentative essays.

Data collection and analysis

This team of novice teachers, and Jess in particular, were selected for analysis because of what the teacher educator initially perceived as a memorable, albeit
typical, instance of a novice teacher experiencing cognitive/emotional dissonance while engaging in the activity of teaching. It was memorable because while observing and video recording Jess’s segment of the actual teach the teacher educator was able to observe her emotional struggle through such behaviors as body posture, eye gaze, gestures, pausing and hedging.

Data from Jess’s segment of the extended team-teaching project included broad transcriptions of: (1) the video-recorded actual teach; (2) the audio-recorded stimulated recall session; and (3) her final reflection paper. These data were analyzed for expressions of cognitive/emotional dissonance based on Peirce’s (1894/1998) semiotic theory – in particular the notion of indexicality – to describe the nature of the signifying function of emotions in the process of mental development. Specifically, expressions of cognitive/emotional dissonance were linguistically and paralinguistically indexed (marked in bold font) by the use of: (1) negatively charged lexis, (i.e., anxious, nervous, really uncomfortable); (2) stative verbs (i.e., I felt overwhelmed, I really wish I had); (3) hedging (i.e., Hm::m, I see …, O:h (;) we::ll, Ri::ght); (4) negative appraisals (i.e., I felt shaky about some parts of the lesson …); (5) body posture (i.e., eye gaze, pointing); and (6) the articulation of a mismatch between expectations and reality (i.e., This was a little unpredictable …, I don’t think I expected that …,) (see also Golombek and Doran, 2014; Imai, 2010).

Jess’s segment of the actual teach revealed a sequence of exchanges that clearly indexed the emergence of cognitive/emotional dissonance. Likewise, stimulated recall session data that referenced Jess’s segment of the actual teach also contained extensive negative emotive content. Thus, the entire portion of the stimulated recall session that referenced Jess’s segment of the actual teach was analyzed in order to examine the quality and character of the dialogic interactions related to her segment of the actual teach. In particular, the stimulated recall session data were analyzed from an emic perspective using the inductive discourse analytic techniques of grounded content analysis (Bogdan and Biklen, 2007). Specifically, the analyses focused on the linguistic instantiation (marked in bold font) of the quality and character of the teacher educator’s and Jess’s interactions as they were unfolding and on attempts by the teacher educator to provide expert mediation to support Jess’s struggle with the cognitive/emotional dissonance she was experiencing.

One year after the completion of the project, the teacher educator asked Jess to participate in a follow-up stimulated recall session in which they watched her segment of the actual teach again. She was asked to comment on her recollection and current perception of this instructional episode. The goal was to more fully understand, from Jess’s perspective, the subjective significance of this episode for her, and after a considerable length of time, if her perspective had changed. This session was audio recorded, transcribed, and analyzed for
emotive content. It is important to note that at the time of the follow-up stimulated recall session, Jess had been teaching this same freshman ESL composition course for two consecutive semesters.

The actual teach: A cognition/emotion growth point emerges

Unpredictability in teaching

Much of the negative emotive content identified in the data referenced what Jess characterized as ‘unpredictability in teaching’. In her final reflection paper, she described teaching as ‘emotionally demanding’, ‘complicated and unpredictable’, and indicated that her emotions were often predicated on her interactions with the students.

Excerpt 1

In a sense, being a teacher is emotionally demanding because it involves human interaction that is complicated and unpredictable. At times, I would become frustrated, angry, sad, happy, or excited all because of my interaction and relationship with the students. (Final Reflection Paper)

The following excerpts from Jess’s actual teach provide evidence of just how emotionally demanding and unpredictable teaching this lesson was for her. Excerpt 2 is included below because it captures the initial trigger of her cognitive/emotional dissonance and thus signals the growth point. As Jess leads the discussion of the essay re-ordering activity, the students offer her answers she is clearly not expecting. Initially, her cognitive/emotional dissonance is indexed by her use of pausing, hedging, eye gaze, and body posture. It is also signaled by a sudden shift in her instructional attention. As the interaction continues, in Excerpt 3, Jess begins to realize that there is more than one way to re-order the essay, and eventually admits to the students that there can be variability in the organization of an argumentative essay.

Excerpt 2

1 Jess: okay, I know you’re still working, but I think we can
2 go over this as a group, as a class now. s:o: (.) what
3 do you think comes first? ((S2 raises his hand)) Yeah?
4 S2: uh, number three?
5 Jess: number three:! (.) does everyone agree? (.) yeah? how
6 do we know it’s s- so what would that be?
7 S2: uh because it has (.) the: the thesis statement.
8 Jess: yeah.
9 S2: and, uh, introduce us to the (.) issue.
10 Jess: right, it introduced us- the topic right? (.) and
11 there- you found a thesis statement at the end, so
12 that would be the introduction.
At the beginning of Excerpt 2, Jess repeats, seeks further elaboration, and expands upon S2's contribution, acknowledging for the entire class that S2 has correctly identified the thesis statement and the introductory paragraph of the essay (lines 1–15). However, as she continues, S5 offers an answer that Jess is clearly not expecting (line 16). This is indexed by her request for a repetition (line 17), her use of a string of referential questions (lines 19–21), which she
appears to be asking herself as well as the class, while simultaneously flipping through the pages of the original essay. After a five second pause in which her eye gaze remains on the original essay, Jess turns her attention back to the class and asks S5 to elaborate (lines 22–23). At this juncture, even though Jess has received an answer she did not expect, she maintains her original instructional strategy of asking the students to articulate their understanding of the rhetorical function of the paragraph they have selected (lines 21–23). Once again, S6 offers Jess an explanation she is not expecting (lines 26–27), which Jess confirms, labels the rhetorical function of the paragraph as both ‘an argument’ and ‘a support’ and then, immediately turns the floor back to the class by asking if everyone selected the same sequence of paragraphs (lines 30–32). Before the students have an opportunity to answer, however, Jess nominates pair 1 (S1 and S2). When S1 offers another answer that Jess is not expecting (line 33), Jess’s cognition/emotion growth point is indexed by her use of an elongated repetition with raising intonation (tw::o:?) and a hedge (mm::m.) (line 34). Despite now having received two unexpected answers, Jess continues her strategy of asking the students to explain the rhetorical function of the paragraph they selected (line 34). As the interaction continues, both S1 and S2 offer the rationale behind their choice and attempt to negotiate with Jess the rhetorical function of paragraph two (lines 36–45). At this point (line 45) Jess’s cognition/emotion growth point becomes even more salient as is indexed by her use of consecutive elongated hedges (Mm::mm, I see::. (.) so::) and a sudden topic shift; signaled by a nonverbal glance and pointing gesture at the board where her teammate, Kate, had just finished outlining the two rhetorical organizational types from the textbook (lines 45–48). This sudden topic shift is also marked by a shift in Jess’s instructional attention; away from the interpretations the students are offering her, toward the essay’s original rhetorical organization (lines 45–52). Jess does this, even though S1 offers her an alternative interpretation of the rhetorical function of paragraph two with a clarification request (line 49).

For the next eight minutes, Jess’s instructional moves follow a similar pattern; she calls on volunteers to explain their re-ordering of the essay, receives several more unexpected responses, acknowledges but fails to take up any of the alternative interpretations that the students offer her, and instead continues to reference the essay’s original rhetorical organization. A notable feature of these eight minutes is that the students begin to offer fewer and shorter contributions while Jess’s explanations become longer, to the point where she essentially dominates the majority of the classroom talk. Toward the end of her segment of the actual teach, Jess does acknowledge that there are different ways that the essay can be re-ordered. Yet, she does this after, once again, a student has given her an unexpected answer.
Excerpt 3

1 Jess: what does she do after she provides the counter-argument? (.)
2 S6: two?
3 Jess: hm::m
4 S6: I’m guessing number two
5 Jess: number two (.) What’s number two?
6 S6: uh: because she (concedes) the importance of the
7 cultural identity, but then she ( ).
8 Jess: right. so she acknowledges the importance of cultural
9 identity and then she goes on to um her own
10 support (.) but look at number one (.) what does that-
11 that’s also about the counter-argument (.) because
12 if you look at the last sentence of the counter-
13 argument that says, “However, in the cochlear implant
14 debate, opportunity trumps cultural identity” (.) and
15 then the first sentence of paragraph number one, “As
16 for the levels of opportunity and success in the working
17 world, deaf people can succeed just as well as hearing
18 people.”(.) so she’s refuting what she just said, or
19 refuting the counter-argument that she just provided
20 in paragraph number four (.) so as you can see, you
21 kind of have different order depending on what kind of
22 depending on how you choose to organize your essay,
23 but: this would be the original order, but: what you
24 just suggested, you can come up, you can write your
25 support first (.) you can write down your support for
26 the argument and then come up with a counter argument
27 and then refute it(.)so as long as you tie tie these
28 together, um any kind of order would, would be fine
29 as long as it flows logically and coherently (.) but
30 for her essay, she has number four as the counter-
31 argument, number one as the refutation, and then,
32 after that, what is it?(2)

(Actual Teach 00:30:02-00:32:20)

In this excerpt, Jess acknowledges S6’s contribution and even offers a
perfunctory opportunity to elaborate (line 6) but then quickly directs their
attention to the correct answer: ‘but look at number one’ (line 11). She initi-
ates this sequence with what appears to be a referential question (‘what does
that-’) but immediately shifts to a lengthy explanation about how and why
the author ordered the original essay (lines 13–21). At this point, Jess admits
that there are various ways an argumentative essay can be ordered indicating
to the students that as long as ‘it flows logically and coherently’ (lines 30–31)
any order will do, all the while emphasizing the correct order of the original
essay.
Throughout her segment of the actual teach, Jess’s cognitive/emotional dissonance is emergent, subtle, and marked more by how she talks and acts rather than what she says, yet very much predicated on her interactions with the students. Their unexpected answers slowly enable her to realize how they have understood the re-ordering activity and that their interpretations of the rhetorical function of individual paragraphs may indeed be valid ways of organizing the essay. However, Jess is unable, or perhaps unwilling, to act on this realization and instead enacts a more traditional teacher stance of making sure the class gets the ‘right’ answer.

The stimulated recall session

Expert mediation directed at the cognition/emotion growth point

Data from the stimulated recall session that referenced Jess’s segment of the actual teach revealed several instances of her negative emotional reaction to this instructional episode. In Excerpt 4, the teacher educator stopped the video recording at the beginning of Jess’s segment of the lesson and asked her to articulate her goal for this activity.

Excerpt 4

1 TE: okay, so now you’ve passed out the paragraphs (.). so
2 tell me about this activity.(.). what your goal was and
3 what you were trying to accomplish
4 Jess: my goal was for them to identify or at least
5 understand what part of the essay is argument and what
6 part of the essay is counter-argument, and where’s
7 your refute for that counter argument, a:nd try to put
8 → them in order (.). but this was a little un-
9 unpredictable because (.). they can really…
10 TE: ( ) yeah. ((laughs))
11 Jess: yeah. ((laughs)) they can order it [differently
12 Fred: [it was seven
13 paragraphs, not the typical five.
14 Jess: → exactly, so it was a little [bit long, a:nd you can
15 just see them, put them in order in whichever way you
16 → want as long as it makes sense (.). s:o, that part was
17 a little bit [difficult to handle. yeah.
18 Fred: [which threw a lot of them off.
19 TE: okay, so that- you mean after they had put them
20 in order and then you were saying, “so tell me which
21 one is first?”[and they were giving you different
22 answers?
23 Jess: [right right.

(Stimulated Recall Session)
While Jess is able to articulate her instructional goals, she characterizes her perception of this episode as ‘unpredictable’ (lines 8–9) and ‘difficult to handle’ (lines 16–17). In responding to an open-ended question, she externalizes her understanding of this instructional episode, allowing the teacher educator to gain access to the subjective significance of this episode for her and to some extent they establish a certain level of intersubjectivity or the ‘attunement to one’s attunement’ (Wertsch, 1984: 13). The exchange of laughter (lines 10–11) signals social affiliation and a mutual understanding that this episode was challenging for Jess. The teacher educator’s re-voicing of Jess’s interpretation of the episode (lines 19–21) seems to serve as a softening or face-saving mechanism.

As Jess’s segment of the lesson continues, the teacher educator draws the team’s attention to where Jess has received multiple unexpected answers and the students have essentially stopped participating. (i.e., multiple long pauses).

Excerpt 5

1 TE: okay. this is where Jess is (. ) dealing with, “is it
2 two? is it number five? wh(h)ich one is thi(h)s?”
3 Jess: Cause I told you, um her organization: in her
4 organization she has counter-argument first right?
5 And she has the support afterward. (4) Has anyone
7 Nan: ((off camera, but presumably to a student.)) Why don’t
8 you say what you have?
9 S8: [From, um- [recorded Actual Teach]
10 TE: → [yeah, this is tough. you wait, you wait, you wait (.)
11 you could have done just what you guys were doing
12 → before and say, “What’s your counter-argument?” as
13 → opposed to “Did anybody find the counter-argument?”
14 but, again, in retrospect, it’s easy to say. when
15 you’re up there, you know, uh. but, again that’s
(Stimulated Recall Session)

After hearing (off camera) Nan nominate a student sitting near her to answer Jess’s question (lines 7–8), the teacher educator offers the team an alternative way to frame their questions; one that marks a subtle but significant shift in a teacher’s stance (lines 13–15). By asking a referential question, ‘What’s your counter-argument?’ rather than a display question, ‘Did anybody find the counter-argument?’ a teacher can signal that she is interested in what the students have understood rather than the correct answer. The team does not seem to pick up on this shift, although Fred does ask about how to handle instances when students are reluctant to answer.
Excerpt 6

1 Fred: would it be better to jump in and ask somebody to help
2 him out?
3 TE: ye:ah, it’s always a [question of
4 Fred: [you get to a certain point, say,
5 “can someone help him out?”
6 TE: ye:ah. that’s an idea. you know, it’s one of those
7 things that if this were your class and you knew them,
8 you would know: the right time to do that because
9 the question that’s always in my mind is the student,
10 (.). does the student not know or is the student (.)
11 just (.). doesn’t want to say? and, if the student
12 really doesn’t know, they could use some help, but
13 if it’s (.). there’s other reasons going on, and
14 especially if you don’t know the kids and you’re not
15 the regular instructor, it’s hard to know that. but
16 hook and saying, “okay, I know you don’t know and I
17 don’t want, and I see your face is getting red.
18 [((laughs)) let me give you, like, “can anybody else
19 help here?” you know? “can we get a little help?””

(Stimulated Recall Session)

The teacher educator’s initial response makes explicit expert-teacher thinking (‘the question that’s always in my mind’) (line 9), emphasizing that part of teaching expertise is knowing students well (lines 7–8), judging the origins of their reluctance to participate (lines 10–15), and responding accordingly (lines 15–20). In addition, the teacher educator models hypothetical instructional talk so the team can hear how an expert teacher might have handled this particular situation. Interestingly, the teacher educator does so by recognizing its emotive nature (‘it’s hard’) (line 15) as well as the signaling of emotional understandings of students (‘and I see your face is getting red’) that novice teachers must learn to embrace as future teachers (lines 17–18).

It is also interesting to note that the teacher educator failed to make explicit the fact that, in all likelihood, the students have stopped participating because Jess has shifted her instructional attention to establishing the original order of the essay rather than the students’ understandings of the rhetorical function of each paragraph. In retrospect this seems like a critical juncture where the teacher educator could have provided the team with an expert’s reconstruction of why the students stop participating and emphasized the fact that this is often signaled by the teacher’s stance; in this case, to elicit the correct answer rather than capitalizing on students’ emerging understandings. Yet, in her final comments on Jess’s segment of the lesson, the teacher educator continues to frame this instructional episode from a more expert teacher’s stance; modeling again, through hypothetical instructional talk, how to recognize emerging student understanding and capitalize on it to achieve certain instructional goals.
Excerpt 7

... when you did your summary of it, one of the things I might have asked was, “Okay, so you put it in this order. Well, why did you put it in this order? Like, what in the text signaled to you that you knew this followed this, and how did—” Because what would have come out, I suspect, is transition words, (. .) passive voice, you know, some of these things that link them together, all of the um transition words that you had in that chart that you showed them. And so some of that might have come out if the response had been, “Okay two, you have paragraph two and then you have paragraph five. Well, why? Tell me why. What do you see: in the text that makes you: know that that would have to come next?” And then I suspect some of those things would have come out, and then you could have just built on them. But I think they got them (. .) later in the lesson but that could have been a spot to maybe have brought that up.

[Stimulated Recall Session]

Using hypothetical instructional talk and providing a rationale for what such talk might accomplish, the teacher educator modeled how an expert teacher might build on students’ emerging understandings, even if they were not those expected by the teacher, and to use those understandings to concretize and reinforce the subject matter content being taught (i.e., transition words, passive/active voice). This apparent consistency in how the teacher educator was attempting to guide the team to reframe this instructional episode is concretized in a mantra that is used consistently and repeatedly in her work as a teacher educator: ‘Teach off your students, not at them.’ Throughout the actual teach (excerpt 2), Jess does, in fact, attempt to ‘teach off’ her students by repeatedly asking ‘why?’ (i.e., ‘Why did you think it will come right after the introduction?’ (lines 22–24), ‘What’s that one?’ (line 35), etc.). Thus, while she repeatedly attempted to focus the ESL students’ attention on the rhetorical function of the concepts she was teaching (argument, counter-argument, refutation), she was unable to use their emerging understandings to accomplish the immediate instructional goal of the re-ordering the essay in its original form.

The follow-up stimulated recall session

Conscious awareness emerges

A year later, in the follow-up stimulated recall session, as Jess and the teacher educator watched her segment of the actual teach again, Jess is prompted to recall her understanding of this episode.
Excerpt 8

1 TE: do you remember (. . ) what you were thinking at that point?
2 Jess: well, so, I was basically getting the order right, and I think, (. . ) I'm kinda struggling there, trying to give, ya know, trying to guide them in getting the order right, cuz, I guess when we, when we, were preparing for the lesson we had the whole essay in front of us (. . ), so it made sense, ... I don't think I had expected that, I didn't think the students might get confused, I think I was expecting the students to just get it right away, the first time, so when I got the different answers, I was trying to, like, ya know, I think I was just trying to get them to get on track ...
3 TE: what did you realize at that point?
4 Jess: well (. . ) at that point, I (ha!) I knew that the students were a little lost, yeah, I knew I had to give them some sort of hints, trying to redirect them so they get the right order, but then I also thought, "hey! you know" (!) the order they got might not be so wrong, they were interpreting the text in their own perspective, depending on how you order the essay, it can work in different ways.

[Follow-up Stimulated Recall Session]

In this excerpt, there is confirming evidence that there was a mismatch between Jess's expectations and the reality of how the lesson had progressed. She admits that when the team designed the re-ordering activity, they had not considered that there might be alternative ways that the essay could be organized (lines 8–11). She frames her interactions with the students as ‘trying to get them to get on track’ (line 13), thus, maintaining the stance that teachers must ensure that students attain the correct answer. Yet, she contrasts this stance with the realization that the students’ interpretations ‘might not be so wrong’ and the recognition that there might be more than one way to re-order the essay; ‘it can work in different ways’ (lines 21–22).

At the end of this session, Jess returns to the notion of unpredictability in teaching, noting with negatively charged lexis, (‘a little nervous’) and stative verbs (‘I was afraid’) the emotive intensity of her initial conceptualization of teaching. Surprisingly, she then contrasts this earlier stance with what appears to be a shift in her conceptualization of teaching, in essence, representing a sort of reconciliation of this cognition/emotion growth point.
From both stances that Jess takes in this excerpt, expressions of emotion permeate her conceptualization of teaching. Her references to ‘unpredictability’ are replete with expressions of emotion; as initially making her feel ‘nervous’ and ‘afraid’ (lines 3–4) but now ‘more comfortable’ (line 16) and ‘my teaching just feels more right to me now’ (lines 18–19). Long after the completion of this project, Jess has come to the realization that unpredictability is endemic in teaching, which is significant for a novice teacher in and of itself; however, it is also striking how her emotive response to the unpredictability of teaching has shifted from negative to positive. She also positions her stance toward teaching differently, describing herself as feeling more comfortable, ‘learning with the students (. ) rather than teaching at them (. ) I know I have a long way to go but somehow my teaching just feels more right to me now.’ (Follow-up Stimulated Recall Session)

Conclusions
The overall findings of this study bring to the surface the inherent challenges of both recognizing and capitalizing on instances of cognitive/emotional dis-
sonance as *growth points* in novice teacher learning. As this analysis makes clear, a major challenge for teacher educators is to recognize cognition/emotion growth points as they ‘come into being’. In Jess’s case, at least initially, the teacher educator was only able to do this on a visceral level. As she watched the actual teach, she had a sense that Jess was struggling. Yet, it was only after a close microanalysis of the transcripts that we are able to identify the trigger of Jess’s cognitive/emotional dissonance and articulate how her shift toward ‘correct’ answers rather than what students were offering her lead to a collapse in student participation.

The subtle, almost mundane quality of Jess’s emotive expressions highlight a central challenge facing teacher educators as they seek to capitalize on cognition/emotion growth points in novice teacher development. Moments such as the one Jess experienced can be powerful sites of potential development for novice teachers, but teachers rarely announce their emotional experiences directly. Instead, their expressions of emotion tend to be much more covert, infusing their talk and actions in incredibly subtle ways, and thus requiring a great deal of attention from teacher educators.

In spite of the inherent difficulty in recognizing cognition/emotion growth points, the design of the extended team-teaching project created a series of activities in which emotional work was allowed to take place. The capturing of the practice and actual teaching episodes and the collective-mediated reflection that takes place during and after these teaching episodes created multiple opportunities for teachers to externalize their thinking and in particular, to become consciously aware of moments of cognitive/emotional dissonance. Likewise, the teacher educator’s intentionality to understand their subjective significance and attempts to re-enact these episodes from an expert teacher stance, all work in consort with the structure of the project to capitalize on cognition/emotion growth points in novice teacher development. Jess’s repeated references to the ‘unpredictability of teaching’ throughout the project and beyond indicate that this event may have indeed functioned as a growth point in her professional development as a teacher.

**Implications for teacher educators**

An implication for teacher educators is the need to pay conscious attention to expressions of cognitive/emotional dissonance and provide mediation that is not only directed at novice teachers’ cognition/emotion growth points but also appropriately calibrated during ZPD activity. Vygotsky (1998) characterizes ZPD mediation as taking on various forms; by showing how a problem could be solved and then determining if the learner can solve the problem through imitation; by beginning to solve the problem and seeing if the learner can finish it; by enabling the learner to solve the problem through interaction with
a more capable other; or by explaining the principle underlying the problem. A challenge for teacher educators is to quickly assess, in moment-to-moment interactions with novice teachers, the forms of mediation that best suit novice teachers’ emerging potentiality. During the stimulated recall session when the teacher educator initially asked Jess to comment on her segment of the actual teach, she did, on the surface, what most teacher educators would do – she responded with social affiliation (laughter) and an attempt to save-face. Yet, by choosing to stop the video recording at this particular juncture in the lesson and allowing Jess to externalize her thinking the teacher educator was able to understand the subjective significance of this event for her. Likewise, Jess was able to become consciously aware that in the activity of teaching she had realized that the students’ re-ordering of the example essay ‘might not be so wrong’. The multiple opportunities Jess had to externalize her understanding of the subjective significance of this episode enabled her to come to a new understanding of both the nature of the content she was teaching and the unpredictability of teaching itself.

Developing a heightened awareness of the quality and character of teacher educator mediation leaves open the question of when cognition/emotion growth points emerge: what are the most appropriate forms of mediation and how do teacher educators know when they should be employed? For example, at the end of the study we wondered how Jess and her team might have responded if the teacher educator had, for example, explained the principle underlying the problem; in other words, if she had said directly, ‘Your shift in stance is what led to the breakdown in student participation?’ Or if after modeling a shift in stance though her own hypothetical instructional talk, she had asked the team to do the same; perhaps, ‘How might your question have been rephrased and what might be the consequences of rephrasing it in that way?’ Retrospectively, of course, we recognize that many alternative forms of mediation come to mind; yet given the emergent and dynamic nature of such interactions the form of our mediation will always be negotiated through dialogue and cannot be predicted or preplanned. To co-opt Jess’s phrase, it may be learning to value the ‘unpredictability’ of working with novice teachers as they are experiencing moments of cognitive/emotional dissonance that signal growth points for teacher educators. A significant outcome of this study is the recognition that it is inside the practices of teacher education, the moment-to-moment dialogic interactions between novice teachers and teacher educators, where teacher educators can learn to see, support, and enhance novice teacher development.

Overall, this study served to scrutinize the practices that characterize our work as teacher educators. The teacher education practice we examined allowed us to open up for closer inspection the complex cognitive/emotional
dimensions of the learning of teaching. The challenges that emerged are ones that deserve greater empirical attention and speak to the professional development needs of teacher educators as well as the design of teacher education practices. Recognizing novice teachers’ expressions of cognitive/emotional dissonance and framing them as growth points in the learning of teaching may prove to be a powerful step in creating initial learning-to-teach experiences that support and sustain productive teacher development in teacher education programs.

Notes
1. Pseudonyms.
   Refutation First: thesis/refutation of counter argument/support for argument/support for argument/conclusion.

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References


