

Awareness, Attention, and Noticing in Teaching and Teacher Education

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Abstract

This chapter argues that what a teacher is aware of, attends to, and notices in pedagogical moments characterizes practical wisdom in teaching and is at the core of teaching and, thus, of learning to teach. Transcending one's socialized limitations as a teacher will, thus, require the capacity to work with and on one's awareness, noticing, and attention in pedagogical moments. The chapter outlines, first, the ontological and epistemological foundations of such a practical wisdom approach to learning to teach. Then, the chapter will discuss implications of such an approach for understanding the subject matter of learning to teach and for initial teacher education program design. Finally, the chapter will make the case that the capacity for practical wisdom in teaching is central to a teacher's agency of change and to social justice issues.

One of the four themes of this book on sites for teacher development concerns the question which capacities are needed for teacher candidates and teachers to allow them to transcend the limitations of their educational socialization so that they can become agents of change. The notion of teachers as agents of change generally refers to the idea that teachers contribute intentionally and actively to changing societal injustices of different kinds (e.g., Ayers, Quinn, & Stovall, 2009). In the main part of this chapter I will focus on a particular capacity that allows teachers to overcome limitations of their socializations as teachers or towards becoming teachers in the case of teacher candidates. After explicating the capacity and its epistemological and ontological framework, I will discuss implications of the role of this capacity in teaching for learning to teach and for teacher program design. In the conclusion section I will argue for the importance of this capacity of addressing one's socialization for a teacher's development as an agent of change in the social justice sense.

One of the generalized characteristics of beginning teachers and more so of teacher candidates is that they do not notice the same things as a more experienced teacher does. While an experienced teacher notices indicators of a problematic situation *as the situation is about to develop*, teacher candidates and beginning teachers often do not and then have to deal with the fallout. On the other hand, it is characteristic of expert teachers to have developed routines that can be executed with automaticity in order to deal efficiently with different aspects of one's teaching practice (Berliner, 2001; Bransford, Derry, Berliner, & Hammerness, 2005). It is that very automaticity that can also be problematic because "the trouble with habits is that they obscure noticing the possibility of choosing to act differently, precisely because they have become part of habitual practice" (Mason, 2002, pp. 71-72).

These points suggest the following: what teachers are aware of, what they attend to, and what they notice in given teaching situations is central to how they (re-)act in those situations. On the one hand, the quality of relevant awareness, attention, and noticing generally improves as teachers develop greater teaching expertise. On the other hand, the routines and habituations that partially make such improvement possible can be in the way of obscuring needed work on what one is aware of, attends to, and notices in a given teaching situation and what one does not. In this chapter I explicate the idea that the capacity of what relevant features a teaching situation a teacher notices and attends to is at the core of becoming and being a competent teacher, where a competent teacher is one who is capable of transcending socialized routines and practices *through* her ability to become aware of what enables her to respond in teaching situations. The relevant capacity that is then at the core of this chapter is a teacher's capacity to work with and on her capacity to attend to and notice salient features of a given teaching situation.

To develop this idea, I outline an epistemological and ontological framework based on the human capacities of awareness, attention, and noticing, and outline how important aspects of teaching and learning are to be understood within such a framework, and discuss important implications of such understanding for preservice teacher education. The chapter outlines the fundamental ideas of *a theory of teaching and learning grounded in the human capacities of awareness, attention, and noticing*.

Awareness, Attention, and Noticing

The following elaboration on the notions of awareness, attention, and noticing as particular mental phenomena is embedded into a particular ontological and epistemological framework. At the core of this framework lies the notion of “experiencing”, a central notion in

Dewey's theory of knowledge (e.g., Biesta & Burbules, 2003), in Maturana and Varela's theory of knowledge (e.g., Maturana & Varela, 1998), and in Marton and Booth's (1997) theory of learning.

The "biological roots of human understanding" (Maturana & Varela, 1998) lie in the status of humans as living organisms and in the way human organisms relate to the world in which they are embedded. As living organisms, humans act within the world in accordance with their own structure and undergo ("suffer") the consequences of their acting (Dewey, 1920, p. 86). It is through such interaction (acting in the world and suffering the consequences) that organisms, including humans, *experience* the world. How we experience the world – i.e., how we interact with it – depends on, as Dewey suggests, the structure that characterizes humans as a specific type of living organism. This structure shapes what and how we perceive the world and, thus, how we know the world (Maturana & Varela, 1998, chapter 1). While certain features of our perceptual and cognitive structure as humans will stay more or less constant, many other structural features are variable and are shaped in response to our experiences, which in turn shapes how we experience the world in future interactions with it (acting upon it and suffering the consequences). Thus, knowing something is manifested in the structural features that shape how we interact with the world. Along this line, Dewey understands knowing as knowing the conditions and consequences of the happening of experience (Biesta & Burbules, 2003, pp. 44-45), and Maturana and Varela (1998) suggest that "all doing is knowing, and all knowing is doing" (p. 26).

There are two important implications of this view. The first is that humans vary in what they know and, thus, how they experience the world, and, then, how they come to know the world more deeply based on those different experiences. The second consequence is that

“reality” for humans is constituted in the way we experience the world – there is, at least for organisms like humans – only the experienced world (Marton & Booth, 1997, p. 138). It is in this sense that Maturana and Varela (1998) say that “every act of knowing brings forth a world” (p. 26). Both consequences together mean that while we might talk about and assume an objective world out there, what each of us can access is only the world as we experience it – and that means that “reality”, as the world we experience, is different for each of us. As I will outline below, within this framework, learning is conceptualized as the coming to know (experiencing) the world in a particular way. Therefore, learning can be seen as a particular type of experience that leads to particular ways of further experiencing the world (more on this below).

Awareness, attention, and noticing are mental phenomena that are at the core of the way we experience (the natural, social, and psychological aspects of) the world. Following Mason (1998, p. 258; 2011, p. 43), I conceptualize awareness as the mental state that enables behaviour and action (“awareness-in-action”) – our interaction with the world. In order to enable action or behaviour, our awareness can but does not have to be conscious awareness. For instance, most of our walking is generally enabled by subconscious awareness. Awareness is an intentional state in the sense that we are always aware *of something*. The “objects” of our awareness include our thoughts, motives, feelings, emotions, and our sensuous and perceptual stimuli (Brown & Ryan, 2003, p. 822). Furthermore, we can also be aware of awareness-in-action (“awareness of awareness”). For instance, I can be aware of the awareness-in-action that enables my walking along a street, like my awareness of my awareness-in-action of the relative height of the ground right in front of me and of the feeling created when my heel touches the ground.

Attention is a process of focusing conscious awareness, providing heightened sensitivity to a limited range of experience (Westen, 1999). In actuality, awareness and attention are

intertwined, such that attention continually pulls ‘figures’ out of the ‘ground’ of awareness, holding them focally for varying lengths of time. (Brown & Ryan, 2003, p. 822)

My attention can be *directed* by me or it can be *captured* by something, like a noise or thought coming into my mind.

Noticing is a *shift* of attention from one object of my attention to another (Mason, 2011, p. 45). When I notice something, I become consciously aware of that something as my attention shifts from what I attended to previously to that something. If I notice something, it *captures* my attention, thus, draws my attention away from what I was attending to before. As such, I cannot intentionally notice something. I can at best ready myself to become aware of that something to make it more likely to actually notice it. Awareness of awareness-in-action arises from noticing (Mason, 2011, p. 43), as I have to notice my feeling of the heels touching the ground when I walk in order to become aware of (part of) the awareness-in-action that enables my walking at a particular time. Our awareness of awareness-in-action develops and is internalized through being sensitized to notice (Mason, 2011, p. 45).

Awareness, Attention and Noticing in Teaching

It seems obvious that what a teacher attends to, what she notices, and what she is aware of as she teaches and as she plans her lessons is important to the quality of her teaching. In this section I want to go beyond this obvious truism and develop what the perspective outlined in the previous section means for understanding teaching. For reasons of space I will limit the focus of my elaborations on probably the most important aspect of teaching: learning. What does this aspect – learning – look like from the awareness-attention-noticing perspective?

Learning is at the core of any notion of teaching, since teaching has the purpose of facilitating learning of students and because professional learning is central to becoming and being a teacher. In this section I conceptualize what it means for someone to learn (something), and then I argue for the relevance of awareness, attention, and noticing for this conceptualization of learning.

The ontological and epistemological framework outlined in the previous section suggests that knowing is what has us act and behave (interact with the world) one way or another and that, thus, has us experience the world one way or another. Following Ference and Booth (1997), I understand “learning as *coming to experience* the world in one way or another” (p. 33, emphasis added). Such “learning takes place, *knowing is born*, by a change in something in the world as experienced by a person” (p. 139; emphasis added): learning leads to a *change in the experienced world*. That means that learning is *not* about becoming acquainted with something in the world that the learner was not acquainted with before, an external object of learning, so to speak. Rather, learning something means a change in how the world is experienced, a change in the experienced world. For instance, when I encounter a black swan during a visit in Australia and learn that there are black swans, I do not become acquainted with a totally new entity, rather the world *as I experience it* has now changed. For instance, I now might entertain the possibility of swans that are neither white nor black when I next time encounter what looks like a green swan; or I might now have developed a greater sensitivity for potential variations of colour of the feathers of birds more generally, which will impact how I experience future encounters with birds. It is in this sense that Ference and Booth (1997) write, “learning is mostly a matter of reconstituting the already constituted world” (p. 139). Biesta and Burbules (2003) hold a similar view of learning as Dewey:

This learning [by an organism] is, however, not the acquisition of information about how the world ‘out there’ really is. It is learning in the sense of the acquisition of a complex set of predispositions to act. In this process the world becomes more differentiated. It becomes, in other words, infused with meaning. (p. 37)

The notions of awareness, attention, and noticing help us to further elaborate on the idea that learning means a change in our experienced world, because it is through the changed way in which we attend to the world and what and how we notice certain aspects of the world that the change in our experienced world manifests itself. Mason (2002) expresses how learning is linked to ways we attend to the world as follows (see also Marton & Booth, 1997, p. 142):

Learning consists of becoming more sensitive to making distinctions, developing awareness of connections and inter-relations amongst those distinctions, broadening the range of resources one calls upon and the tasks one undertakes in order to pursue aims and goals which are more precisely articulated, and increasing the scope and nature of possibilities and potential we recognise, because our present moment . . . is extended.

(Mason, 2002, p. 231)

Learning thus means an increased scope and nature of possibilities and potential (Mason) or a more complex set of predispositions to act (Dewey), which in turn suggests that in most cases having learned something means that we can – sometimes even have to – *attend* to our experienced world in ways that we did not / could not before. For instance, when we say that someone has learned that photographs can be easily manipulated using computer programs, it *means* that the person might now attend with heightened sensitivity to features of a photograph that might suggest to us that a picture on the cover of a magazine in a magazine rack next to the cashier in a supermarket has been manipulated. This example illustrates how having a more

complex set of predispositions to act (having learned something) can capture our attention in particular contexts in new ways: the learning leads the person to shift her attention to searching for particular features in photographs. The person notices something she would not have noticed before.

If what we attend to and what we notice in particular contexts is characteristic of what it means to have learned something, then the relevance of the notions of awareness, attention, and noticing for facilitating learning (teaching) becomes obvious: helping someone else learn something means helping that other person attend to / notice her experienced world in ways different from before.

This paradigmatic perspective on learning has the notions of awareness, attention, and noticing at its core. Since learning is at the core of teaching – understood as the practice of facilitating learning – this perspective provides a new outlook on teaching as a professional practice. To be consistent, this perspective will need to be carried over to preservice teacher education, because teacher education practice has itself at its core learning and teaching. Thus, from this perspective, there is no need to further argue for the relevance of awareness, attention, and noticing for preservice teacher education or for that matter, for teacher education more generally. Rather what I will do in the next two sections is to outline some of the more important *implications* that such a perspective on learning (to teach) has on preservice teacher education. The next section will look at implications for our understanding what learning to teach is primarily about or, in other words, what the “subject matter” of learning to teach in initial teacher education programs is. Identifying such subject matter will have to have implications for the design of initial teacher education programs. Following the next section I will outline some of those implications for initial teacher education program design.

Implications for Preservice Teacher Education:

The Subject Matter of Learning to Teach

Mason (1998) suggests that academic subjects like mathematics arise “when we become aware of awarenesses-in-action such as those that constitute counting, ordering, classifying, and relating, and start to formalise these in the language of algebra and geometry” (p. 258). Poetics, the science of writing and understanding poetry, develops when we become aware of our awareness-in-action involved in writing and reading poetry. For instance, we become aware of what we are aware of (awareness-in-action) when we hear a poem written in pentameters: a particular rhythm and rhyme structure. If awareness of awareness-in-action lies at the core of a subject matter as suggested, then such second-level awareness is central to a teacher of such subject matter.

From this perspective, subject matter is characterized by the type of awareness of what has us interact (awareness-in-action) in the world in a particular way. Those who “know” the subject matter are aware of their awareness-in-action, i.e., they are aware of what enables particular behaviour and actions that characterize the practitioners of that subject matter. Therefore, knowing subject matter is linked to awareness of what we are (partially at the subconscious level) aware of so that we are able to behave and act in the way that is characteristic for someone knowing the subject matter. This links knowing of subject matter directly to what it *enables us to do* or, in other words, what such awareness allows us to attend to and notice in the world of our experiences.

What is then the “subject matter” in learning to teach? The subject matter in learning to teach arises when we become aware of the awareness-in-action, where the awareness-in-action is

the awareness (conscious or not) that enables a (good) teacher to do what she does. The question this section focuses on is in what way this awareness-in-action is relevant to teaching.

Teaching has many components involving a diverse range of activities: planning lessons, marking, reflecting on past teaching, etc. But at the very heart of teaching are the activities linked to teacher-student(s) encounters in the here-and-now – teaching is primarily about interacting with students in the moment. Van Manen (1991a, 1991b) has used the term *pedagogical moment* as a label for

situations where we [the teacher] feel called upon by the child [student] to do something. . . . A distinguishing feature of pedagogical moments is that something is expected of us. We have to do something, even if that is holding off for the moment. (van Manen, 1991b, p. 96)

It is these pedagogical moments that are at the heart of teaching because at its core teaching is about facilitating student learning, and it is in the encounter in the here-and-now that all the components of teaching “materialize”. For instance, planning cannot give consideration to the actual context of the teaching situation for which the teacher plans – there are too many variables unknown at the time of planning, and there are also too many for a teacher to consider in her planning. So, the components that cannot be considered in the planning (including how students respond to an activity) will materialize in the moment in which the teacher enacts a particular plan. Thus, the awareness that gives rise to the subject matter in learning to teach is the awareness of the awareness-in-action that has the teacher act appropriately in the here-and-now of the pedagogical moment.

There is one approach to learning to teach that is concerned with exactly such acting in the here and now of the pedagogical moment: the practical wisdom approach to teaching and

learning to teach. The practical wisdom approach to professional practice goes back to Aristotle's distinction between technical knowledge (*techne*), theoretical knowledge (*episteme*), and practical knowledge or practical wisdom (*phronesis*) (for an explication of Aristotle's distinction, e.g., Dunne, 1993). A number of scholars have drawn on the idea of practical wisdom in the Aristotelian sense to characterize teaching (e.g., Shulman, 2004; Phelan, 2005; van Manen, 1991a). However, by far the most developed practical wisdom approach to learning to teach has been the realistic teacher education approach by Korthagen and his collaborators (Korthagen, 2001).

If at the core of teaching as a professional practice lies the (re-)acting in pedagogical moments, then the kind of knowledge central to teaching as a professional practice is practical knowledge (*phronesis*) or perceptual knowledge (e.g., Kessels & Korthagen, 1996; Korthagen, 2001, chapter 2; Korthagen & Kessels, 1999). Perceptual knowledge is the basis for a teacher's capacity for discernment: "Discernment speaks to a teacher's capacity to see the significance of a situation, to imagine various possibilities for action and to judge ethically how one ought to act on any given occasion" (Phelan, 2005, p. 62).

Conceptual knowledge is not the type of knowledge that we need most in our case [the case of teaching]. It is too abstract, too much stripped of all kinds of particulars that are predominant in concrete experience: emotions, images, needs, values, volitions, personal hang-up, temper, character traits, and the like. (Korthagen, 2001, p. 27)

Conceptual knowledge is, of course, important to teaching, and perceptual knowledge (practical wisdom) makes use of conceptual or theoretical knowledge and of generalized rules, but "only as summaries and guides" (Korthagen, 2001, p. 27). "All practical knowledge is context-related, allowing the contingent features of the case at hand to be, ultimately, authoritative over

principle” (Korthagen, 2001, p. 25). Conceptual or theoretical knowledge *serves* practical knowledge as needed.

The awareness-attention-noticing framework unpacks the idea of “perceptual knowledge” and its role in wisdom-based learning to teach into different components. To illustrate these components and how they relate to each other and the notion of “perceptual knowledge” I want to draw on one concrete example of a pedagogical moment. Let us assume that there are about ten minutes left until the end of class time, that I have originally planned one more activity to be done during this class, that this planned activity will take much longer than the remaining ten minutes, and that students are about to finish the second last activity. This creates a pedagogical moment for me because I now face the issue of having to decide on an alternative plan for the last ten minutes. Let us further assume that my thinking in that moment goes along the following lines: I have about ten minutes left; there is not enough time for the planned activity; starting the planned activity with so little time is not an effective approach; the best might be to stop here, but since I cannot do that, I have the students engage in an activity for the remainder of the class that engages them with the topic at hand; I tell the students that for the remainder of the class they can work on their homework, which I already assigned at the beginning of the previous activity.

Within the awareness-attention-noticing framework it is awareness-in-action that enables my acting in this pedagogical moment. The behaviour linked to such action might have included my looking at the clock, my moving to the front of the classroom, my calling for attention, and my speaking to the students. My thoughts linked to such action might have included my noticing of the time, my noticing that there is less time available than my planned last activity requires; my decision to abandon the last activity and to let students work on their homework for the rest

of class time. By definition, what gives rise to the behaviour and the thoughts is some form of awareness, namely the awareness-in-action. Some components of my responding to the pedagogical moment I might be (consciously) aware of (awareness of awareness-in-action), others I might not be aware of. For instance, I might be aware of the time that I saw displayed on the clock, but I might not be aware of the complete structure of the awareness-in-action that led to my using a particular way of calling students to attention or the spatial awareness that was the awareness-in-action that allowed me to move to and stand in front of the class.

From the awareness-attention-noticing perspective on the wisdom approach to teaching and learning to teach, the pedagogical moment and my responding to it involves three relevant “components”: awareness of awareness-in-action (what I am consciously aware of what gives rise to my responding in that moment), awareness-in-action that I am not aware of, and features of the situation that did not give rise to any action on my part. Above I provided examples for the first two. Two examples for the last one might be the following: (a) in the situation I did not notice indicators that could have suggested to me that the group of students in the far back corner was not even close to having successfully finished the last activity, which was designed as a prerequisite for the homework assignment; (b) at the time of the pedagogical moment, I did not give consideration to the potential that assigning homework for the last ten minutes in class is a very ineffective use of time for some students.

As I understand “perceptual knowledge” (Korthagen) and “discernment” (Phelan) being used in wisdom approaches to learning to teach, those terms would talk about awareness in awareness-in-action, and insufficient perceptual knowledge or discernment in a given pedagogical moment talks about those features of the moment that did not give rise to any action on part of the teacher. The two examples given at the end of the previous paragraph illustrate two

types of perceptual knowledge that might be salient to a given pedagogical moment but was not available to me in the example: something I did not notice (consciously attend to) and ideas that were not available to me at the time of the pedagogical moment.

Following Mason's (1998) notion of a subject matter, it is our awareness of awareness-in-action that gives rise to the subject matter of learning to teach. To draw on the example above of the pedagogical moment, what learning to teach as a subject matter then is interested in is the awareness-in-action that gave rise to my responding in the example: my looking at the clock, my moving to the front of the class, my using a particular way of calling upon students' attention, my deciding that students should begin their homework for the remaining ten minutes, and so on. The systematic study of such awareness-in-action, i.e. the study of learning to teach, would then explore issues in learning to teach like time management, planning of activities, classroom management, homework assignments, and socially, developmentally, and culturally responsive teaching. Generally, the subject matter of learning to teach is then the awareness of awareness-in-action that enables a teacher to (re-)acting appropriately in response to the significant features in a pedagogical moment. Such appropriate (re-)acting in pedagogical moments requires the drawing on prior experiences that relate to the moment at hand (including experiences engaging with educational and pedagogical ideas), and the ethical judging of what is to be done in this very moment. For instance, in the above example, my letting students start their homework for the last ten minutes might be more a habitual response to this particular feature of the situation (ten minutes left without a time-appropriate activity). Alternative ways of responding in those situations were (so I assumed) not available to me at that very moment, which limited the way I was able to respond in the moment and might have made my responding less adequate. To draw on the two examples from above, I was limited in my responding by not noticing a salient feature

of the situation (that some students were not ready to engage meaningfully with the homework assignment) and by not having available in the moment alternative possibilities to respond to a pedagogical moment with this particular feature, namely having ten minutes left in class without a time-appropriate activity.

Learning to teach from a practical wisdom approach within the awareness-attention-noticing framework, then, is about helping teacher candidates develop a particular kind of awareness of awareness-in-action, namely awareness, attention and noticing appropriate and needed for the kind of discernment discussed by Phelan (2005). Thus, central questions for learning to teach from this perspective are: What does a teacher candidate need to notice (attend to) in certain types of pedagogical moments? What does a teacher candidate need to be aware of in those moments? And how can we make it more likely that a teacher candidate notices the salient feature of a pedagogical moment?

Understanding the subject matter of learning to teach in the way just described has obviously implications for pedagogy in preservice teacher education and for teacher education program design. Some ideas about the types of implications of the practical wisdom approach for teacher education *pedagogy* are presented in Falkenberg (2012, 2013), Korthagen (2001), and Korthagen, Kim, and Greene (2013). The next section will focus on the implications of this approach to learning to teach for preservice teacher education program design.

Implications for Preservice Teacher Education: Program Design

The design of a preservice teacher education program should give consideration to what teacher candidates are to learn, the way in which they are assumed to learn to teach, and the pedagogies that respond to those assumptions. In the previous section I have outlined

implications of the awareness-attention-noticing perspective on learning and on what the subject matter of learning to teach is. In this section I will discuss implications of the awareness-attention-noticing perspective on learning and the understanding of what the subject matter of learning to teach is on preservice teacher education program design. I will discuss what I consider two such major implications for the design, one linked to the important role of engagement with concrete teaching experiences, and the other one linked to the level of flexibility built into the program design.

From the perspective outlined above, learning to teach is primarily concerned with a teacher's acting in the here-and-now of the pedagogical moment. All other aspects of teacher education practice are seen as supporting such acting. As argued above, practical wisdom approaches to learning to teach have that very focus. What does a practical wisdom approach that is concerned with developing teacher candidates' awareness of awareness-in-action in pedagogical moments in teaching imply for program design? The most important implication can be illustrated by drawing on Korthagen's (2001) practical wisdom approach to preservice teacher education. He suggests that within a practical wisdom approach to the education of teachers

[a teacher educator's] task is to help the student become aware of salient features of the experience. One is there to help the student see, not to teach the student a number of concepts. One is there to help the student refine his or her perception, not to provide the student with a set of general rules. One is there to help students make their own *tacit knowledge* explicit . . . , to help the student capture the singularities of the experience, and to find the rightness of tone and the sureness of touch that only holds good for the particular situation. One is not there to lecture about educational theory, to instruct general rules, or to extensively discuss instructional principles. For 'the matter of the

practical' is just not helpful very much by such conceptual knowledge. What it needs is the development of perceptual knowledge. (Korthagen, 2001, p. 28)

If we accept Korthagen's view of what the central task of teacher educators is, then teacher education programs need to be designed so that they engage teacher candidates with first-hand experienced pedagogical moments. Such engagement needs to help teacher candidates to notice salient features of pedagogical moments, to have available a range of possibilities to act in the moment, and to ethically judge how to best act in this moment. The main implication for program design is then to provide for such learning experiences early on and regularly throughout the program and to facilitate and scaffold those experiences with the objective of helping teacher candidates to develop and work on and with their awareness of awareness-in-action as those are the basis for their (re-)acting in pedagogical moments. There are two different types of contexts for such experiences.

The most powerful type of context is provided by the practicum component in pre-service teacher education programs. Here teacher candidates have ample opportunities to encounter first-hand experiences with pedagogical moments, either through their own teaching or by observing authentic teaching. However, in order to help teacher candidates *to develop* practical wisdom, those experiences have to be facilitated and scaffolded, which has two important implications for program design, one concerning the linking of university-based coursework and the field-based teaching experiences, and the other one concerning the question of who is involved with teacher candidates' field experiences.¹

¹ Bullock and Russell (2010) have rightly pointed out that teacher candidates experience authentic teaching (as students) in all their on-campus course work, and that that teaching (by the teacher educator) can and should become itself a focus of inquiry. While this first-hand experience of pedagogical moments by teacher candidates does not have direct implications for program design, it does have implications for a pedagogy of teacher education in the context of

Learning “theory” in courses that are isolated from practice teaching is ineffective in a practical wisdom approach to learning to teach, because it runs counter to the need that teacher candidates have to learn and practice theorizing their experiences with pedagogical moments. Such theorizing (as an activity, not a set of statements) needs to arise from and be relevant to the immediate need to deal appropriately with experienced pedagogical moments. This requires an appropriate competency on the part of the teacher educator (collaborating teacher or university staff), which is supported by having university-based teacher educators being directly involved in teacher candidates’ practicum experiences. Such an idea of “linking theory and practice” through program design features has not just been proposed by proponents of a practical wisdom approach to learning to teach, but all those who see the “problem of enactment” (Darling-Hammond, 2006, pp. 37-38) and the “theory-practice divide” (Falkenberg, 2010a, pp. 10-17) as best addressed through a closer relationship between university-based course work and school-based practice teaching, for instance through: providing extensive field experiences across the entire program (e.g., Dillon & O’Connor, 2010); involving the same teacher educators on campus and practicum schools (e.g., Beck & Kosnick, 2006); working with professional development schools (e.g., Darling-Hammond, 2005); starting with early practicum experiences (e.g., Korthagen, Loughran, & Russell, 2006); providing university-based seminars while teacher candidates are in their practicum (e.g., Darling-Hammond, 2006, chapter 6); and having students teach in schools as part of university course work (e.g., MacDonald, 2010).

The second main implication of the practical wisdom perspective on learning to teach for teacher education program design concerns the need for flexibility within a teacher education program. Teacher education programs that are fixed in terms of the number and types of courses

on-campus course teaching and learning that is to support a practical wisdom perspective of learning to teach.

required are problematic. In fixed programs of this type the kinds of experiences that students require are assumed to be predictable *in advance*. In Falkenberg (2010b) I have argued for a program-adaptability approach to the problem of admitting applicants with different qualities to teacher education programs, where

the courses within the program would need to allow the instructors to respond to the identified needs of students at the individual level and link the courses in a way that allows a team of instructors to teach from a *developmental* perspective over the time of the whole program. (Falkenberg, 2010b, pp. 23-24)

The need for such program adaptability to allow for a developmental approach to learning to teach is even more relevant if learning to teach is understood less as the learning of conceptual knowledge and more as the development of perceptual knowledge, i.e. the development of competencies of noticing and attending to certain features of a concrete pedagogical moment with an awareness of possibilities of acting and re-acting wisely in such a moment. Practical wisdom is not just more complex to develop than conceptual knowledge because it involves a teacher's judgment in concrete pedagogical moment drawing partially on conceptual knowledge. It is also more complex to develop because practical wisdom involves, as Korthagen (2001) writes, the ability "to find the rightness of tone and the sureness of touch that only holds good for the particular situation" (p. 28). To develop such "tact of teaching" (van Manen, 1991a) requires (a) rich experiences of pedagogical moments that teacher candidates can draw from when confronted with a new pedagogical moment, and, (b) ongoing help by teacher educators with noticing the salient features in a pedagogical moment and with developing the needed awareness that is required for acting wisely in those very moments. If a teacher candidate does not "see" what is to be seen in a pedagogical moment in order to act wisely, reading books or articles or

trying to memorize facts or develop conceptual knowledge will not help her to see what is needed to be seen.

From a social constructivist perspective on initial teacher education Beck and Kosnick (2006) make a program design suggestion that fits quite well with the program adaptability requirement from a practical wisdom perspective:

We believe that a small cohort program with its own faculty team is the arrangement usually most conducive to these kinds of outcomes. The case for smallness has been made well by a number of writers on schooling . . . , and the same basic argument can be applied to preservice education. (p. 2).

Conclusion

In this conclusion section I would like to get back to the question raised in the introduction section: What capacities are needed to be developed in teacher candidates and teachers to help them transcend the limitations of their own socialization in the education system in order to become agents of change in the social justice sense? Two important capacities that are needed for such transcendence are (a) a teacher's capacity to be aware of, to attend to, and to notice salient features of pedagogical moments, and (b) a teacher's capacity to work on and with her capacity described in (a). Following I will elaborate on those two capacities.

How a teacher engages with students in the moment is one central aspect of social justice teaching. As hooks's (1994, chapter 12) example of confronting social class in the (university) classroom illustrates, how a teacher responds or not responds in pedagogical moments during class time can very much be a matter of social justice:

Although no one ever directly stated the rules that would govern our conduct, it was taught by example and reinforced by a system of rewards. As silence and obedience to authority were most rewarded, students learned that this was the appropriate demeanor in the classroom. Loudness, anger, emotional outbursts, and even something as seemingly innocent as unrestrained laughter were deemed unacceptable, vulgar disruptions of classroom social order. These traits were also associated with being a member of the lower class (hooks, 1994, p. 178) .

Students who are loud in class, show anger or emotional outbursts, or laugh unrestrained create a pedagogical moment that calls upon the teacher to (re-)act – partially because, as hooks (1994) suggests, teachers “conduct their classrooms in a manner that only reinforces bourgeois models of decorum” (p. 180). What a teacher attends to in such a moment, what she notices, is also a matter of social justice. For instance, does she attend to the student behaviour *as* a violation of a model of decorum or (also) *as* a matter of class difference? Does she attend to the class background of her students in that very pedagogical moment? What a teacher is aware of, attends to, and notices in pedagogical moments is not just a matter of the quality of her teaching practice more generally, but is also a social justice matter, not least because “those of us . . . from working-class background are empowered when we recognize our own agency, our capacity to be active participants in the pedagogical process” (hooks, 1994, p. 183).

Thus, one site of teacher development for addressing one’s limitation of one’s socialization in the education system in order to become agents of change is a teacher’s teaching practice itself. If it is a teacher’s ability to notice the salient features of a pedagogical moment and to be aware of meaningful ways to (re-)act in the moment that is at the core of her professional teaching practice and of the enactment of practical wisdom in teaching, then any

change agency would mean *agency over one's ability to be aware, to attend and to notice*. Thus, from the perspective developed in this chapter, a core capacity that is needed to support transcendent change and the development of change agency in teachers and teacher candidates is *the capacity to work with and on one's awareness, attention, and noticing*. It goes beyond this chapter to suggest how such capacity can be developed, but Mason's (2002) *Discipline of Noticing* does provide a systematic approach to the development of this capacity (see also Falkenberg, 2012).

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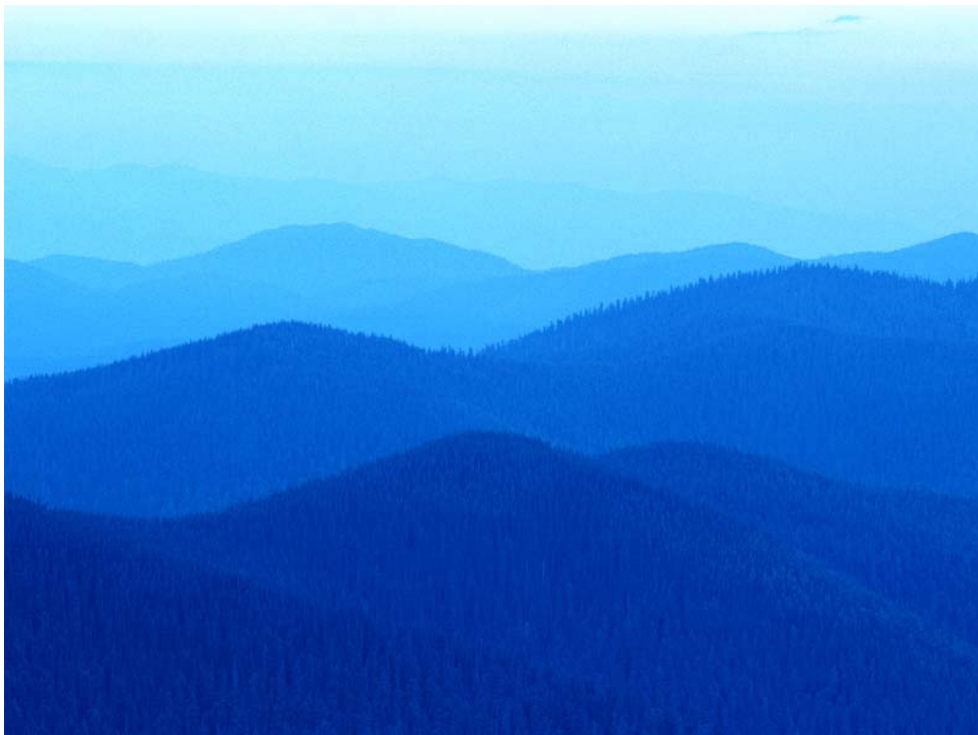
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