

Chapter 16

Rivers and Fireworks: Social Constructivism in Education



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My first teaching job, fresh out of college in the mid-80s, was as a first grade (Class 1) teacher in the heart of the inner city of Jersey City, New Jersey, USA, in a small Catholic-run elementary school just a stone's throw across the river from the twin towers of New York. My teacher preparation program at an Ivy League liberal arts college had focused exclusively on working with secondary school students, and my upbringing had been in a small rural town in the middle of the state of Maine. I knew nothing of this environment. Replacing a teacher who had walked off the job in mid-November, I had stepped into a classroom filled with thirty-three active six-year-olds, almost entirely African-American and Hispanic, with a plastic crucifix of Jesus hanging crookedly against the blackboard. I knew I was in way over my head. What did I know about six-year-old children or their cultural realities, or about living in a big city, or about Catholicism as a faith, or even about teaching first graders who didn't know how to read? I had no idea what to do with these children. What I actually realized, on that very first day of my very first real job, was that I needed to take a giant step backward and ask myself a few tough questions. In particular, I needed to ask, "What do I believe about teaching and learning, and how do those beliefs impact my actions in this classroom?" I devoted long hours, well into the evenings, poring over first grade (Class 1) textbooks for reading and math, building hands-on material to encourage interaction, and learning about the lived realities of these children's circumstances. During class sessions with these energetic youngsters, I often scribbled notes to myself on scraps of paper that I would tuck in my pocket, to consider later when I would sit down to write in my diary at night. My students grew accustomed to waiting while I jotted down a

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turn of phrase they might use, or a dialectical way of speaking, or a question or idea I had about pedagogy. I became meta-aware, conscious of my consciousness, hyper-focused on each moment as if frozen in time and space. I was aware of every action and thought, in a strange new place where I tried to hook the newness onto what I already knew or believed, simultaneously trying to take what I thought I knew and hold it up to the light to re-examine.

I was swimming in a river I didn't recognize, flailing my arms furiously to stay afloat, in a current pulling me into the swirling energy of these lives. The river of these children's realities, was, on the one hand, filled with urban poverty and racial tensions, and, on the other, with rich relationships with extended family, with vibrant song and dance, and childlike wonder and resilience. For two years, I came to love these children by floating in their river as their teacher, and by allowing them to teach me.

Later in my career, as I returned to my rural roots and to teaching high school English, the image of the 'river' would become for me a metaphor of the socio-cultural approach to education, a theoretical framework first described by Vygotsky (1978).

Exploring Our Beliefs

To be a teacher takes courage, but also humility, self-awareness, and a career-long willingness to embark on a journey with no clear end goal. A teacher needs to begin by asking, and keep asking every single day of their career, "What do I believe about teaching and learning, and how do those beliefs impact my actions in this classroom?" This question matters because, regardless of whether or not a teacher is able to explicitly articulate a philosophy of teaching and learning, our actions reflect our values and ideologies. It matters because our beliefs get communicated to children in our classrooms as part of the hidden, and the not-so-hidden, curriculum (Ebert II et al. 2013). It matters because our belief system fuels our ability as teachers to assist every child to aim for his/her potential as a thinker, doer, dreamer, and feeler. If you are a teacher, ask yourself these questions every day: "What do I believe about teaching and learning?"; and "How do those beliefs influence what I do in my classroom?"

The first question teachers should ask themselves is: "Do I believe that all children can learn?" *All* children. The poor, the rich; boys and girls; those with disabilities and those with special gifts; children from every faith, and economic class structure, and colour and caste; *All*. This question challenges us to identify our hidden biases about certain subgroups of children, such as those with disabilities or of a certain background. If we answer "no," then we must next ask "Who is less capable, in my eyes, of being able to learn and grow in a classroom setting?" We need to reframe our lens to allow those children into the learning, by imagining them to be equally capable as their peers of stretching and growing.

If a teacher responds “yes” to this question of whether *all* children can learn—as I hope that anyone reading this chapter would—then the next question is: “But what does it *mean* to believe this? How does (or might) that belief *manifest* itself in my classroom?” And still, one more difficult question to confront: “What aspects of my classroom, of my actions, of my words *might not reflect this belief* that all children can learn?” Let’s contemplate those questions for one moment before moving on: (a) What does it mean to believe that all children can learn? Does it mean that I, as a teacher, am obligated (or can we say “privileged”) to have them in my classroom? Can I learn from them? Are there children whom I do not yet believe are capable of academic growth and potential?; (b) What aspects of my classroom might need to be altered to reflect a belief that all children can learn? Do I need to act differently? Set my classroom up in different ways? Try different strategies? Offer different options?

Let’s move on. Next, ask yourself these questions: Do I believe that ...

- Intelligence can be measured?
- Children learn best sitting quietly at desks?
- Seats should be arranged in rows?
- The teacher with the knowledge should stand at the front of the room?

These bulleted beliefs reflect a traditional transmission mode of teaching (Johnson 2010), also referred to disparagingly by the renowned Brazilian philosopher Paulo Freire as the “banking model” of education (Micheletti 2010). In this model, the teacher appears to be doing the active work of teaching, filling the students up, like an empty vessel or a blank slate. But this model is limited by its lack of acknowledgement of the learner’s active—and necessary—engagement in his or her learning, and, further, of the teacher’s active construction of new knowledge in relation to the learner’s. That is, this transmission model obscures the vibrant interconnections and metaphorical fireworks happening in genuine and growth-filled learning environments (Rodriguez 2012).

In contrast, a teacher might explore his/her belief system by asking: Do I believe instead that ...

- Children with all types of differences can learn?
- All children have both challenges/needs and gifts/strengths?
- Many social, cultural, and personal factors impact learning?
- The teacher and students construct knowledge together?
- The teacher learns from his/her students?

These beliefs are in alignment with a social constructivist model of education, and it is this model that this chapter explores in detail.

Sociocultural Theory

Sociocultural theory, a broad ideology based heavily on Vygotsky (1978) work and expanded upon by others, is based on the belief that learning is a result of our social

and cultural influences and processes. This theory stresses the interdependence of the individual and society, such as societally-regulated activities. Our society and culture tell individuals how to act, what to wear, what to eat, how to speak, what is expected of them in the future, and much more. Schools, as social institutions, are sites that regulate individual actions and development. Schools are microcosms of society, sending explicit as well as hidden messages to students about who they are, who their families and histories are, and who they can, might, or will become (Minick et al. 1993). In short, this theory gives

careful attention to the institutional context of social interaction. Culturally specific institutions, such as schools, homes, and libraries, systematically structure the interactions that occur between people, or between people and cultural artefacts, such as books or computers. One cannot develop a viable sociocultural conception of human development without looking carefully at the way these institutions develop, the way they are linked with one another, and the way human social life is organized within them (Minick et al. 1993, 6).

In light of the downplaying of the role of individual agency in sociocultural perspectives, some theorists have reframed Vygotsky's work as "activity theory," accounting more fully for individual choice or movement within the larger social and cultural structures (Thorne 2005). In other words, individuals are never solely slaves of socio cultural-historical influences; they also have decisions they make within and among those influences. Some people have wider access to resources and to a broader array of choices they can make, whereas others are more limited in what they have and can do. However, every individual takes individual action against the backdrop of social and cultural realities.

To use my own metaphor of the river, every human being swims in a contextualized river controlled by factors that are social, cultural, religious, historical, and political. This metaphor helps to illustrate that we are largely at the whim of these forces that carry us downstream; that we reach out and grab those 'resources' (people, things, institutions, events, circumstances) that our particular rivers provide; and that it is difficult (though not impossible) to jump from the banks into other rivers. Within that river, we do have a choice and free will: we can float with the current, swim against it, head for the shores, try to get out of it entirely, and more, all while the pressures of the current carry us onward. If we are supported by the 'river', we float along quite happily, knowing that we will be carried toward a secure future. If, however, we struggle to stay afloat in that river, we expend more energy simply to keep ourselves moving. We might find ourselves aching to see beyond the banks of our river, or reaching out for life-support that is not there for us. We might decide to give up, feeling overwhelmed by circumstances.

This theory provides us with a framework for understanding the process of teaching and learning; we can reflect on our own past educational influences and our beliefs about learning. Remember those questions we asked about our beliefs and ideology? Our answers are largely framed by our own 'rivers' that we ourselves have floated down, or, possibly (though less commonly), that we have fought against or leaped beyond. Furthermore, our culture and society influence the way we teach and learn. These two complementary points might seem obvious: we teach

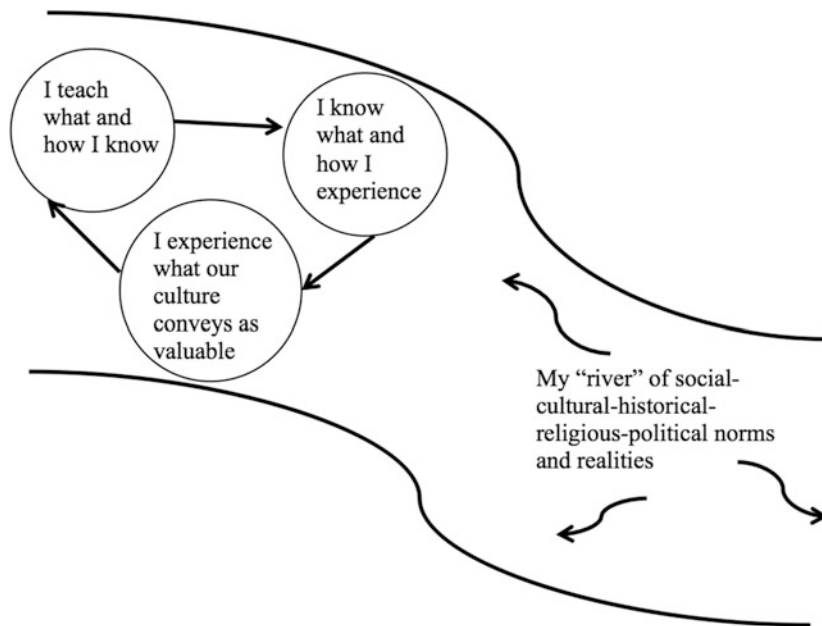


Fig. 16.1 Teaching within the river of sociocultural realities

what and how we know; we know what and how we experience; we experience what our culture believes to be important; consequently, we teach what and how we are led to believe is important. See Fig. 16.1.

Let's add a further complication to this model: We are not only influenced by the river we live in; we simultaneously influence that river! As we live within the norms—the riverbanks—abiding by the expectations of the river's flow, we also contribute to reinforcing that flow and those riverbanks, through our social, cultural, religious, and political actions that are embedded in that river. Surely, we might, at times, choose to align ourselves with movements or subgroups who aim to re-align the banks or the flow of the river, but, regardless, by living within a given set of norms, we replicate and reproduce those norms. So let's add the bolder arrows in the middle to convey that interaction. See Fig. 16.2.

Now, let's take that a step further: If teachers teach what (and how) they know, and they know what part of the river is theirs, then teachers are a vehicle of social reproduction for students: for future generations. We all, by the very nature of being alive, contribute to our river's norms; but teachers engage in publicly-approved actions that intend to convey information and beliefs to others. Schools, as institutions within the broader society, have the power to conserve and reproduce social realities, while also having the power to question or alter those realities. So now the model looks more like this (Fig. 16.3).

One important question in sociocultural theory is whether teachers might simultaneously learn from and be influenced by their students' 'rivers.' Can those

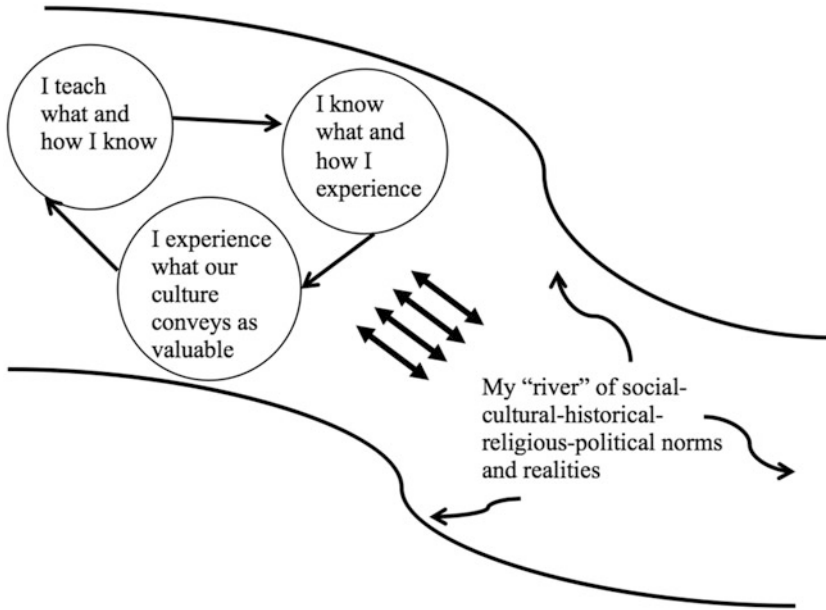


Fig. 16.2 Teaching and the river of sociocultural realities—multidirectional influence

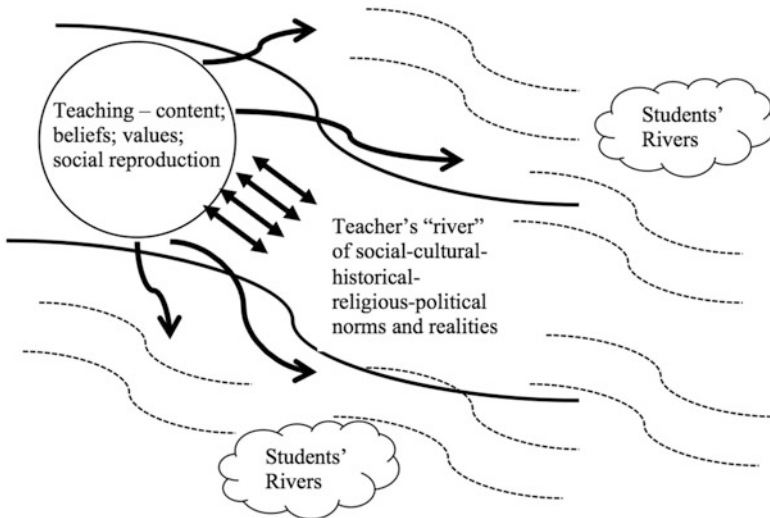


Fig. 16.3 Multiple rivers of sociocultural realities—teaching and learning

dark, wiggly arrows be multi-directional? I argue that the answer is, emphatically, ‘Yes!’ Given a sociocultural framework, schools involve “real people who develop a variety of interpersonal relationships with one another in the course of their shared activity in a given institutional context” (Minick et al. 1993, 6). These relationships influence learning, but also impact the ways in which we view and interact with the world.

But if we return to the first question—“What do I believe?”—we must explicitly deconstruct this preset conclusion, under a critically-informed sociocultural lens, while considering our own agency within those larger influences.

Such exploration begins with asking “How did I learn as a child? What worked well—or not—for me, and why? What access did I have—or not—to resources?” In other words, we need to open our eyes to the ‘river’ we swam in as students that helped us to ‘flow’ to the position of becoming a teacher. A child’s educational experience in India might be vastly different, based on the type of schooling attended, the location of that school (city/rural, north/south/east/west), the influences of parents and other family members, the influences of religion, caste, class, and gender, and of course, so much more. I could set up similar, though also different, factors for my own childhood education in the United States.

Moving beyond our personal exploration, however, we must also critically engage in the questions that disrupt our comfort zones: “Is my way the best way for my classroom of students? What rivers do my students inhabit and how might that knowledge influence my perceptions of them? What else might I need to learn or know in order to help every child succeed?”

Lastly, we must confront a set of questions—the toughest set of all in my opinion—that bring us even deeper into a critically-engaged pedagogy of social justice: “Whose realities and voices did I *not* hear as a student growing up in my river? Whose realities and voices are missing from my own classroom? And why are these voices missing?” For example, did your river embed a gendered view of history? Did it include people with disabilities or other differences? Did it permit a questioning of normative values that allowed for multiple viewpoints? (Nasir and Hand 2006). With a teacher’s eye toward these questions, they shift to become a part of our pedagogies, our explicit curriculum, the hidden curriculum, and the ‘null’ curriculum. The null curriculum implies that which is deliberately and/or unconsciously left out of the explicit, and even out of the hidden, curriculum (Ebert II et al. 2013). These exclusions are largely a result of power structures that permeate society and require close examination, unpacking, and disruption.

The Zone of Proximal Development

One key element of the sociocultural perspective is that of the Zone of Proximal Development (ZPD), defined by Vygotsky (1978) as “... the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (33). This zone is where all

teaching and learning takes place, between what a student already knows, and what the student cannot yet know or learn.

When I organize teacher workshops, I like to create an interactive visual to help describe the ZPD, and I will attempt to walk you through that exercise here.

1. Begin by placing your two hands in front of you, palms facing each other, one above the other and about 12 inches apart. You should look like you are holding an imaginary box by its top and bottom.
2. Look at your bottom hand and at the space below that hand. That space is your comfort zone; it is everything you already know in a given area. For example, it might be making a jelly sandwich (cooking know-how), or throwing a ball (sport ability), or multiplying numbers up to the 12s (math knowledge). You already have learned it at some point in the past and you can now perform that task without assistance.
3. Now look at your top hand and the space above it. That space is the too-hard zone, what we might call the “fight, flight, or freeze” zone; it is everything you *can't yet know* because you have no way to access that information at this time. For example, this zone might include making a 5-course French gourmet meal for 20 guests, or playing professional football, or doing advanced calculus, or speaking fluent Russian. “Fight, flight, or freeze” means that, faced with a currently-impossible (though not always-and-forever impossible!) task, your brain will either force you to fight (yell, cry, argue, act disruptively), to flee (put your head down, say you don't care, give up, leave the room, drop the class), or to freeze (become immobilized or numb). In scientific terms, your amygdala in the limbic system of your brain goes into emotional overdrive and overrides or shuts down cognition (Goleman 2011). If it hijacks the capacity for clear thought, then the reaction might be seen as impulsive or overly-emotional or irrational; but, in fact, it is a brilliantly protective feature that allows us to find ways around situations perceived as dangerous. In learning terms, it can allow us to recognize the need to get ourselves or our students back into the zone of learning.
4. Still holding your hands up? Good. Now look at the space between your two hands. That is the Zone of Proximal Development; and that is the zone, the *only* zone, where teaching and learning can take place. That is the zone where learners stretch beyond the comfort level with guided help from teacher, a coach, a mentor, or some other more-knowledgeable resource or person, but not stretched so far as to feel shut down. It's a beautiful thing, the ZPD, and it guides all learning for all people.

Okay, you can put your hands down now and let's consider what this zone of learning means for teaching.

The comfort zone is an interesting place ‘to hang out’ sometimes; it reassures us that we are capable and it requires little effort from us. But we don't want to stay in that place, or we will never advance our own learning. Teachers should permit a bit of time for students to be in the comfort zone, such as with familiar texts or songs,

but they should not be allowed to hang out there for too long, as students (and teachers) can become bored or disengaged. Teachers must also remind themselves to move beyond their own comfort zones as well, perhaps a more difficult task than that of moving students along in their zone of learning.

The ‘fight-flight-freeze’ zone is not at all a fun place to be, and so teachers must continually assess whether certain student behaviours might be a reflection of the teacher asking for ‘too much’ from a given student or classroom. There are also those students who have an overactive, easily-triggered, amygdala due to neurological factors, such as autism spectrum disorders or trauma. These students may hit the fight-or-flight zone more quickly than the norm, but the result is the same: no learning.

If we teach, say, a group of Class 4 students, then we have some idea of the normed expectations of ‘Class 4’ explicit curriculum; what Class 4 students should know by the end of the school year. The curriculum is a good starting point for trying to identify the ZPD of students, but we must also get to know our students as individuals who may or may not fall comfortably within that presumed zone. Simply saying, “Here’s the curriculum, so do it,” means that *some* students will learn within their ZPD, *some* will land within their comfort zones (no learning, finding school boring, too easy) and *some*, more disastrously, within their ‘fight-flight-freeze’ zones (also no learning, but finding school terrifying). To refer to a previous example, you can’t make me learn Russian any better or any faster by telling me to just “do better” or “care more,” or by punishing me with negative marks. You will only exacerbate my extreme reactions that are driven by my amygdala, not by the cognitive or rational parts of my brain. If the teacher keeps pushing a student in ‘fight-flight-freeze’, it will only escalate the situation, and the one who loses is the student who is already in a state of distress.

Instead, a teacher might recognize that distress, and work to calm down the over-active amygdala, such as through words of comfort, a safe space for the child to rest, or some small action (a glass of water, a cracker, a silly poem) to bring the child back down emotionally.

The ZPD also embeds the notion of scaffolding; that is, understanding each student well enough to build carefully constructed steps toward higher and higher goals. It is not enough to say, “Well, I broke that difficult math assignment into steps, so they should be able to do it now.” Some children might respond to those steps, but others might need even more breaking-down, and still others might require more enriched study to advance. This concept of scaffolding gets tricky, as we need to be continually conscious of the ways in which our biases and assumptions, our own ‘rivers’ of belief, might influence our perceptions of certain children. In sociocultural theory, intelligence is not an absolute, reified, permanent condition, but rather a relationship with opportunities, with teaching and learning, with social and cultural realities within a given river. Seen in this way, scaffolding is intended to be a positive support system, one that believes in the potential of every student. It also allows the ZPD to represent a fluid, ever-upwardly-expanding potential.

This concept of scaffolding leads us easily to the metaphor of building, of constructing knowledge together, teacher and student, in relationship with each other.

What Is Social Constructivism?

A theory that builds on Vygotsky's work and that harkens back to Dewey (1897) is "social constructivism," the notion that learners actively mediate knowledge within a social context (Hirtle 1996). This theory accommodates a social view of learning that also permits an exploration of how the individual makes sense of experiences by accommodating them into what s/he already knows. Thus, this notion allows for an interplay of the individual and the broader social context (Nasir and Hand 2006). Cooperative, inquiry-based approaches to classroom methodologies permit students to engage personally and actively to build their learning, redefining a more traditional view even of *knowledge* itself. A more recent term for social constructivism is "interactive constructivism," locating the construction of knowledge in the realm of activity (Reich 2007). This interaction implies that every learner—including both student and teacher—must construct learning actively as an agent; must communicate within a context and culture as a participant; and must take time to reflect with metacognitive awareness as an observer to what is happening in the classroom (Reich 2007). This activity is filled with energy and openness.

In a social constructivist model, the focus shifts from the teacher who is 'teaching' to the student who is 'learning,' using communication to build on students' prior knowledge, perceptions, beliefs, and home cultures (Hirtle 1996; Shuell 2016). Knowledge becomes dynamic and interactive, with a focus on critical and creative thinking through problem solving and critical inquiry. It allows for the investment of the self as agent within larger socio cultural forces (Thorne 2005). Remember the earlier discussion of the tendency to swim or float or fight against the current? This theory allows the teacher to engage in agentic choices with students, even within the 'river' of the classroom and school, and, ultimately, the larger societal forces.

Schema

As a teacher, building on students' experiences and prior knowledge means tapping into their schemas, their minds' building blocks that help organize new knowledge, a term originally introduced by Piaget (MacLeod 2015).

I tend to use two different metaphors to better conceptualize the idea of schema: that of coat hooks and of fireworks. Think of hanging bits of new knowledge or learning onto a hook, onto what we already know. If I am learning a new language, for example, my first step is to link it to the language I already know, and then keep

building and expanding based on new concepts. Here, you can easily see the connection to scaffolding; breaking learning down into steps that are accessible to each student based on that student's schema, and, consequently, building the learning within the student's ZPD. If there is no coat hook available, the new bits of knowledge slide to the floor.

I also think of fireworks: each new bit of learning explodes outwards, building even more connections for the next set of explosions. Schema expands, not in easily-defined stages, but as a network, with new learning not only being accommodated by old knowledge, but permitting an exponentially expansive web. Thus, the more students engage, experience, read, communicate, and collaborate, the greater their potential for future learning.

Moving from Theory to Practice: Ideas for the Classroom

The question still remains as to how to translate a theory or ideology into practice. While teachers may agree in principle with a more culturally-responsive, interactive, social constructivist pedagogy, it may be more difficult to envision the day-to-day real-life activity of a classroom setting. You might find yourself asking, "But *how* do I do this in an overcrowded classroom with limited resources and limited time?" Interestingly, note how we as teachers can retreat to the comfort zone! We might, for example, tell ourselves that it is impossible to implement these theories into practice; that we don't have time or know-how to do so; that such a shift will impede the learning for those at the top; and so on. We can come up with many reasons to keep on doing what we've always done, to stay in our comfort zones, that space below our bottom hands in the ZPD model. When we consider shifting to a learner-centred constructivist classroom, do we find ourselves edging close to fight or flight? Do we want to argue the point, or retreat, or simply revert to our comfort zones of 'the way we've always done things'? If you find yourself formulating these types of dismissals in your head, ask yourself if you are in 'fight, flight, or freeze' or if you simply want what's comfortable. Remember that both of those possibilities shut down growth. Real growth happens in that middle zone of healthy risk, discomfort, but not terror or shut-down. Teachers too need scaffolded support, through professional development workshops, mentoring, and leadership within schools, and strong how-to texts to read, in order to take risks within the ZPD. This very chapter might be a step of the scaffolding that a teacher needs to move beyond the comfort zone into a healthy place of growth and learning. Remember that teachers are also learners, and constructivist theory insists that teachers should learn and grow in relationship with their students.

The following are a few ideas to begin or continue the process of creating inclusive, interactive, and responsive classrooms.

- a. **Pairs or Small Group Work:** Ideally, small groups should be between 3 and 5 students, because groups with more learners tend to lead to some students doing

more of the work and others retreating to comfort zones. Small group work can be used for projects and presentations, for sharing out readings, or for working together on worksheets or other activities. Teachers can assess participation by asking group members to submit a list of who did what, or by assigning roles to students such as ‘note taker’, ‘question asker’, ‘mediator’, ‘illustrator’, or any other responsibilities the teacher might develop. The jigsaw technique involves giving different texts, parts of texts, or assignments, to different groups of students, who then share their learning with the whole group (Filkins 2007).

- b. **Think/Pair/Share:** This method is one of my favourites for ensuring fair and equitable participation of all students. First, ask students to privately jot down or think of a response to a relevant question, or to summarize a key point made. Then, ask students to pair up and share their response with each other. You may take an intermediary step here to ask pairs to then pair up, thus expanding the groups into sets of 4. Finally, ask each pair or group to share out one response. This activity ensures that all students have formulated a response, provides every student with a voice within a small and safe partnership, and allows more vocal students to share out, at the end, to the whole group (Simon 2017).
- c. **Portfolios:** Have students build a collection of their work throughout the year. At various times, students can examine their portfolios for a self-reflection of their growth to date. A portfolio also provides a strong assessment piece to share with parents and to see concrete examples of learning.
- d. **Chalk Talk:** Ask students to come to the board to write questions, solve a problem, or write a word in response to a prompt. Students are given time to do come to the board as they would like, while the room stays silent. Again, this gives a safe venue for sharing ideas without the pressure of being called on unexpectedly during class time (Fenton, n. d.).
- e. **Differentiated Instruction:** The concept of differentiated instruction is about meeting individual students where they are, drawing on their unique strengths, preferences, and learning styles. For example, do not only give instructions orally for auditory learners, but also write them on the board for visual learners. Honour students’ personalities, background, and interests, by appealing to differences in various ways, such as types of examples used, or the choice to work alone, or with a friend. Consider allowing a choice of final projects, such as a piece of art, a story, a musical piece, or a skit. (Note: In any assessment, however, even when differentiating to meet the strengths and needs of all children, be sure to keep the actual standard or objective the same for all students, and to be consistent with grading criteria.) (Tomlinson 2000).
- f. **Allow space and time:** Students must be provided space and time to think critically and creatively, and for active engagement and reflection. Give students time to ask questions, to write in journals, to speak up with opposing viewpoints. Give them opportunities to stand up, to move around, to play games, and to participate in their learning. This type of engagement is vital for student motivation and growth.

- g. **Consider the classroom environment itself:** seating arrangement, music, wall displays, and lighting. How might a teacher enliven the space to be warm, welcoming, and interactive?

These ideas give only the starting point for stretching yourself within your ZPD to build methodologies that reflect constructivist ideologies. They might also serve to affirm the good work you are already doing.

As you aim to teach to each student's ZPD for a given subject matter, remember that you too are also learning and growing within your own ZPD, in active and fluid relational interactions with students. The essence of social constructivism is the student-teacher relationship. As Johnson (2010) explains, "To relate means to make connections ... Instead of an authoritarian, top-down relationship based on rules, power, and authority, holistic educators seek to create more equal relationships in the school and classroom based on principles of respect, community, and a shared set of values" (xix). Palmer (2007) refers to this communal respect as the teacher's "capacity for connectedness" (11). Such connectedness and engagement creates meaningful and lasting learning experiences for everyone.

Examples: What Beliefs Exist About Teaching and Learning?

Example 1: Indian Village. From January to May 2016, I was in India as a Fulbright Scholar, during which time I was able to visit schools in many places around India. One of these visits took me to a remote village where young children from often-illiterate homes were learning Hindi for the first time. What I saw happening defied explanation, as the classroom created a joyful place filled with happy children and an equally happy teacher. In this setting, there were no chairs or desks to get in the way of the vibrant activity happening, the singing and marching and clapping, the sitting in circles around vocabulary cards, the individual writing of personalized stories, the leading of calendar activities by the children themselves. The teacher participated in the lives of the children through culturally relevant pedagogies, and the children were engaged in learning by connecting the new to the known, through a carefully scaffolded program that worked within the children's ZPD. It was not only a model of what could be, but of what is, when best practices emerge from best theories around teaching and learning.

Example 2: My first job. Let's return to my opening scenario of my first teaching job in an inner city elementary school in the U.S. All the children were from the under-privileged circumstances. They listened to different music than what I was familiar with; they lived in large apartment buildings, unlike my small-town upbringing; they spoke a variety of languages and engaged in a variety of urban cultural and social practices. In short, their 'rivers' were both similar to, and distinctly different from, my own. I knew that the teaching of Class 1 content was only a fraction of my new job; the deeper value of our time together, and the way in which the content was going to 'stick', was through getting to know these children,

learning from them, being open to what they saw, believed, felt, and experienced. I often took small groups of them to New York City, taking the metro underneath the Hudson River and arriving at the Twin Towers where we all gazed in awe at the tall buildings surrounding us. I brought them to the local library where they got their own library cards. I talked to parents and listened to what they expressed for their hopes and fears, their lived realities that they trusted me enough to share. By the end of the year, my students learned to read stories, I learned to ‘read’ the environment, and we all learned to care for one another.

Holding Our Beliefs in an Open Palm: What Does This Mean?

Hold one hand out, palm upward, as if it holds a fragile butterfly. Returning to the first set of questions about our beliefs around teaching and learning, we must learn to hold those beliefs in an open palm. What does this mean? Look at your hand: you are not dropping what it holds, nor are you crushing it in a fist; you are merely examining the butterfly. You do not need to abandon a given belief, only consider it: What does each belief look like, feel like, mean to you as a teacher and to your students? Could you let the belief go if you find it doesn’t suit your practices and current beliefs? Are you compelled to hold the belief tightly, perhaps too tightly, in your grip?

Interestingly, to prepare for a presentation about this idea, I did a Google search for “open palm” images. A screen shot appeared with a variety of pictures of open hands.

Given the topic of the talk, I found myself asking, “Whose hands are portrayed? Whose are not?” I was suddenly confronted with the reality of the image: all of the hands were five-fingered, no differently-abled or scarred ones; all were white; and all, or certainly most, seemed to be adults. Consequently, whose reality is or is not portrayed in this simple source of open palms? What is the “null” curriculum being taught and learned in such an image?

Closing Reflection

The inter-relationship among the elements of learning discussed in this paper should be evident. Sociocultural theory provides a starting point for considering the ‘river’ of our own lives and as important, the lived realities of our students. To consider teaching and learning within a fluid and personalized Zone of Proximal Development means, necessarily, to also consider the ways in which we construct knowledge in relationship to others. Social constructivist thought and practice offer

a lens that makes learning meaningful, as we scaffold new knowledge within the ZPD by hooking it onto each student's schema for continual neural fireworks.

Rodriguez (2012) states that “teachers must constantly change themselves based on the interactions they have with their learners [T]his dynamic, interactive dimension of teaching requires that they know their own teaching brain as well as they know how their students learn” (177). Palmer (2007) takes this sense of self-knowledge beyond the brain, however, insisting that “teaching holds a mirror to the soul” (3), a mirror that effective teachers must be willing to look into every day.

This chapter began by reflecting on beliefs around teaching and learning. In sum, the questions teachers should never stop asking the following questions:

- What do I believe? Why do I believe it? Why does it matter?
- How do my beliefs impact my behaviours as a teacher and learner?
- How does my ‘river’ of circumstances and associated factors impact me and those around me?
- How do I keep myself critically and creatively engaged as a teacher and learner, now and into the future?

Asking these questions—holding our beliefs, values, and pedagogical practices in an open palm—requires courage and humility. This courage can enable teachers, who swim in the currents of their own rivers, to become agents able to engage in forms of resistance, and to disrupt hegemonies and blind spots. Such questions, theories, and practices become an endlessly intertwined web of reflection and engagement, involving our whole and true teaching selves.

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