

For Classrooms to Be
Cultures of Thinking
for Students, Schools
Must Be Cultures of
Thinking for Teachers

It is no coincidence that I have chosen to give this mindset top billing on our list. It is the launching pad from which all substantive efforts to create cultures of thinking in schools must proceed. On a personal level, this mindset informs the stance I take in my initial conversations with schools and school leaders interested in taking on this work precisely because it lays the foundation for any program of professional learning that we might design. To understand this mindset, we need to first understand the concepts of *informational learning*, *transformational learning*, and *institutional mirroring*.

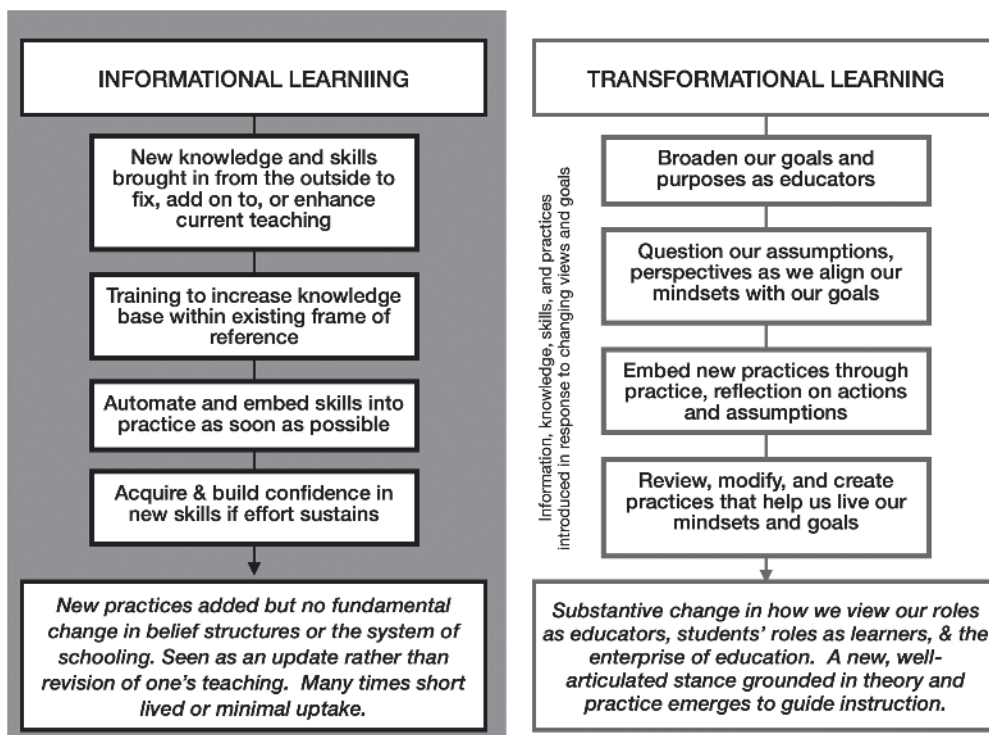
When speaking with school leaders for the first time, I always strive to convey that the work of developing a culture of thinking is not about “training” teachers in one-off workshops, but engaging them in ongoing, embedded learning over time. We must step out of the old, dominant paradigm of *informational learning*; that is, the learning that primarily focuses on increasing our knowledge and skill level in a merely additive way. Frequently the goal of such learning is to fix problems or weaknesses in short order by training up teachers in a set of new practices. In informational learning, the goal is to put these practices in place (often as quickly as possible) rather than seeing them as mere tools to help one achieve some greater vision and purpose. Indeed, too often the tool becomes the vision in such trainings. For instance, teachers in a workshop may learn how to implement new assessment practices without ever examining what one is trying to achieve through those practices, how they fit into the ecology of the school, are contextualized by one’s teaching practices, or related to one’s views of learning. However, when such underlying issues are not fully addressed, the practices being implemented will necessarily lack a strong footing. Consequently, they may be abandoned quickly if they ever take hold at all. Thus, the flurry of activity around the practices imparted in the training may not achieve any lasting change.

Working within the paradigm of informational learning, leaders often assume that more is better, creating a full plate of professional offerings to skill up teachers. Teachers may even respond positively to such efforts, speaking about a workshop as being useful, practical, giving them something they can use, focused on the nuts and bolts of teaching, and so on. Although such efforts can have their place and be of value, the problem is that informational learning rarely goes very deep and is often fleeting. Estimates are that the implementation rate for such programs is only around 10% (Knight 2007, p. 10). Furthermore, informational learning cannot produce the substantive change and rethinking of schooling we seek when we talk about creating cultures of thinking. This requires transformational learning.

Transformational learning calls on us to question the assumptions that undergird our practice through participation in constructive discourse with our colleagues (Mezirow 2000). It is about examining and revising our practice in fundamental ways as opposed to merely adding on to it. To be sure, transformation, deep learning, and substantive change are complex endeavors. Therefore, we must support educators in embracing this complexity by providing opportunities to inquire into their teaching practice within a rigorous, challenging, and nurturing community of professionals, professionals who are willing to take risks and question the status quo themselves. Such inquiry communities move beyond a soft collegiality “in which care is taken not to cause offense” and toward the tough collegiality that allows for hard questioning of our collective practice and is grounded in a willingness to explore other perspectives (Humes 2007).

To accomplish this shift from the purely informational to the transformational (see Figure 1.1), we must develop dialogic structures while providing ongoing, protected time for substantive interchange and reflection. As opposed to a discussion in which ideas and proposals

Figure 1.1 Informational versus transformational learning.



are bandied about with the goal of reaching an outcome, a dialogue brings us together in joint inquiry to build understanding. “In dialogue participants explore complex, difficult issues from many points of view. Individuals suspend their assumptions freely. The result is a free exploration that brings to the surface the full depth of people’s experience and thought, and yet can move them beyond their individual views” (Interlead 2019). There is a fundamental shift in the way teachers approach such dialogue as well, moving from a stance of proving and justifying one’s actions to improving one’s practice (Nelson, Slavit, and Deuel 2012). The first is a defensive posture one might assume when feeling threatened or confronted. The second looks at dialogue as an opportunity for growth. The more we develop this capacity in teachers, the more a school will be capable of meaningful change and reinvention (Abernathy 1999; Senge 2006).

To promote and support such dialogue, schools must create a safe and open environment of trust, respect, vulnerability, and authenticity. This will often mean that rather than imposing top-down structures and expectations on the group, a more collaborative structure in which leaders become learners and learners become leaders emerges. Groups may be co-facilitated through informal leadership and a co-construction of agendas and goals, which brings in multiple voices and increases ownership. In such settings, efforts are made to de-privatize teaching so that educators come to view teaching as a collaborative rather than purely individual act (Campbell 2018). In addition, discussion protocols are often employed to focus and slow down conversations, create equity, and facilitate participants’ embrace of complexity. Protocols change the free-flowing nature of conversations and may at first be rejected by some. However, their benefit in creating a safe environment for the examination of issues, asking of questions, and challenging of the status quo makes them invaluable tools.

A hallmark of a school culture, whether focused on thinking or focused on running the machine, is often revealed in what I call “institutional mirroring.” The idea is that in any institution, people will generally mirror the practices, behaviors, and treatment they experience in their communities when they are interacting with those they supervise or lead. The way teachers get treated as learners and as professionals by their ministries of education, state-level education departments, district-level administrators, and school principals will be mirrored in their classrooms. If teachers are controlled and micro-managed, they will tend to control and micro-manage their students. By the same token, if teachers are encouraged to innovate, collaborate, and inquire, they will tend to promote these same processes in their classrooms. Thus, we need to support teachers in the ways we want them to support their students. For teachers to be able to create a classroom culture in which students think, inquire, collaborate, discuss, take risks, and learn from mistakes, teachers need to experience such learning for themselves.

WHAT THE RESEARCH SAYS: *WHY DOES IT MATTER?*

When we develop cultures of thinking for teachers, we create fertile ground for professional growth and change. In such cultures, teachers “feel safe to be vulnerable, to admit failings or mistakes and to trust that their colleagues are giving feedback in order for them to improve” (Schwartz 2020). When teachers are part of a culture of thinking, they are more likely to engage in rich conversations about learning, including the discussion of problems, strategies, and solutions. Learning then becomes an “ongoing, collective responsibility rather than an individual one” (Opfer and Pedder 2011). In this atmosphere, individuals can take risks and stretch themselves because there is mutual trust, support, and a shared vision (Keay, Carse, and Jess 2019; Piggot-Irvine 2012). What is more, the learning that occurs in such spaces has a much higher rate of implementation in the classroom, 85%, versus the 10% rate for informational learning (Knight 2007).

Transformative Power of Inquiry

Inquiry-based conversations in which teachers work toward making collective meaning of events, data, and experience through constructive dialogue with peers is a fundamental characteristic of a culture of thinking. In these spaces, teachers embrace wondering and grow comfortable with ambiguity and uncertainty. Conversations are alive with conditional language, such as: “I wonder,” “maybe,” “this might be,” “one possibility could be,” and so on. Conditional language allows one to remain open to other perspectives, invites a greater sharing of ideas, and avoids early closure and quick fixes (Langer 1997). In contrast, absolute language, such as, “we should,” “it is,” “we need to,” “we can’t,” and so on, tends to constrict conversation, exclude other perspectives, and force early closure.

The presence of more inquiry-based talk in professional learning groups is linked to teacher’s transformative learning, leading to substantive changes in teaching practice (Cochran-Smith and Lytle 2015; Nelson et al. 2012; Schon 2010). However, this kind of talk is not the norm in most schools. Nelson, Slavit, and Deuel (2012) found that teacher conversations in schools ranged from disconnected, connected, exploratory, to inquiry-based. The connected conversation was the most prevalent. In connected talk, “The presentation of ideas tends to be authoritative or as statements of fact, and questions are usually logistical, procedural, or technical. Differing perspectives, if recognized, are seldom questioned, tested against evidence, or contrasted with other ideas. Conversational turns may be related to each other in short sequences as teachers complete a task or report results of an activity” (Nelson et al. 2012, p. 27). Helping teachers move beyond connected talk to more exploratory and inquiry conversations by using conditional language and protocols is both a mechanism and a goal of creating a culture of thinking.

This kind of professional learning, centered on collaborative meaning-making, feels authentic rather than manufactured by outsiders and has been shown to have a positive effect on student achievement (Goddard et al. 2010; Hargreaves and O'Connor 2018; Lara-Alecio et al. 2012). Through such collaboration, teachers are better able to reflect on their teaching practice, allowing them to assess if what they are doing works or if changes are needed (Reeves, Pun, and Chung 2017). However, it is important that this reflection focuses not only on one's actions, but also on the assumptions and beliefs underpinning those actions. Teachers who do this are more likely to employ responsive teaching techniques that help students build understanding (Atkin 2019).

When a culture of thinking exists for teachers, morale improves, and teachers report higher job satisfaction, which contributes to increased gains in student achievement. Unfortunately, this kind of meaningful, sustained collaboration among teachers is too rarely found in schools (Sari-sohn 2018; Schwartz, 2016). Without time and opportunities to learn together, discussions centered around student learning simply don't occur. This inevitably leads to less teacher learning and a decline in the quality of instruction (Burgess, Rawal, and Taylor 2021; Goddard, Goddard, and Tschannen-Moran 2007; Myers 2018).

Institutional Mirroring

In a culture of thinking, innovation, creativity, and experimentation are the norms. Risk-taking is necessary to drive innovation and transform schools (Le Fevre 2014). As Deborah Meier has said, "Taking on risk and being more daring is a real important part of creativity." To build a classroom culture that encourages student risk-taking, teachers need to demonstrate their own willingness to try new things. However, teachers tend to be risk-averse for various reasons, including the fear of being ostracized and the fear of public failure (Le Fevre 2014). Therefore, a supportive school culture that embraces teacher inquiry and innovation is important in helping teachers feel safe enough to take risks. When teachers explore and experiment with new ideas that may not always work, students observe how their teachers react and adapt. Thus, students learn the value of failure, understand that learning is a lifelong process, and accept that mistakes are a natural part of that process (Mizell 2010; Schwartz 2016).

The importance of teachers' own learning mirroring the type of instruction we want to see in classrooms has been well documented (Borko 2004; Wei, Darling-Hammond, Andree, Richardson, and Orphanos 2009). This is particularly true when the focus is on helping students to develop new and more powerful ways of thinking (Gadge 2018). If teachers are to engage their students in any thoughtful action—inquiry, deep learning, problem solving, close looking, complex analysis, or metacognition, for example—then they need to delve into these practices themselves. They need to experience these various approaches first as learners before they can attend

to them as teachers. This allows them not only to see the power of these methods, but also to understand them from the inside out, developing empathy for their students as learners. This results in the kind of authentic implementation that can influence student learning (Greenleaf et al. 2011).

Mirroring extends beyond teachers' initial learning, however. The learned practices, approaches, and ways of thinking must also be sustained in the ongoing lives of teachers at a school if they are to make their way into the classroom in a sustained way. Researchers in Ontario, Canada, found that teachers who experienced rich professional learning around cooperative learning were, nonetheless, unable to sustain their efforts unless their school culture was one that employed these same practices among the teachers (Hargreaves and O'Connor 2018). Thus, if school leadership felt the new learning was just a "training" designed to add new skills to a teacher's repertoire and not also for the learning of adults in the school, the new practices languished. In our own work, we have seen that when school leaders view the practices related to creating a culture of thinking as important to them personally in their work with teachers, a culture of thinking is more likely to take hold in classrooms.

VISIONS AND REFLECTIONS: *HOW MIGHT IT LOOK?*

What might a culture of thinking for teachers at a school look like? What might it feel like? How can we imagine a new reality beyond what currently exists? To help us formulate such a vision, we first tap into our own experience, then we reflect on the current state of professional learning and collaboration at our schools.

Constructing Our Vision

We have all been members of cultures of thinking at one time or another. Perhaps, for you, this was when you were part of a study group, book club, professional organization, workshop, or graduate class. Think back to a time when you were a part of a group in which your individual thinking as well as the group's collective thinking was valued, visible, and actively promoted as part of your ongoing and regular experience. Identify one specific group that fits this description. Make sure it is a group you were a member of rather than its leader. Recall what it was like to participate in that group. Think about how that group felt when you were a part of it. *Write down at least five adjectives that capture your feelings of the group.* Feel free to use the pages at the end of this chapter, the margins, a sheet of paper, or your electronic device.

Having your responses recorded in some way will help you create a vision. Now, think about how that group functioned, the activities it engaged in, the way time was spent. *Identify and record at least five actions or verbs that characterize the way the group functioned and acted.* Finally, see if

you can *come up with a metaphor, image, or symbol that captures something important about the group. Record that as well.* Guided imagery and reflection on our experience help us to construct a vision of what is possible. Elements and practices from our own experience can be used not only to reassure us that creating a culture of thinking is possible, but also to fuel our imagination and identify our wants and desires for the future we are working toward.

Group Discussion

If you are reading this book with others, bring your lists, writings, and perhaps drawings to share and discuss.

- What does your collective compilation reveal about important practices and features of a culture of thinking?
- What commonalities do you notice in people's reflections?
- What new ideas emerge from other's experience that you hadn't considered but are now intrigued by?

Contemplating Pictures of Practice

To further extend your vision of what a culture of thinking for teachers might look like, the forms it might take, and how it might feel, we now examine two pictures of practice that exemplify some key elements and important practices in developing a culture of thinking for teachers. Keep in mind these are not templates, but examples to inspire. How do these connect to your own professional experience? How do these connect to what is currently happening at your school?

Case One: A Workshop With Donald Graves. I remember a writing workshop I attended as a new 3rd-grade teacher led by Donald Graves. Don was not just a pioneer in literacy instruction; he was a revolutionary. Many credit him with transforming the way writing is taught throughout much of the Western world. His book, *Writing: Teachers and Children at Work* (1983), clearly located teachers as learners with their students. While I don't remember much of what Don actually "said" at the workshop, I do remember engaging in writing and reading. A lot. Every day. For sustained periods. I also remember conferencing about my writing and discussing my reading with colleagues. It was scary to do this the first time, and I felt very vulnerable. What would others say? What if my writing was just bland and banal? Throughout the week, everything we did mirrored what he was asking us to do in our classrooms. He created for us the conditions he

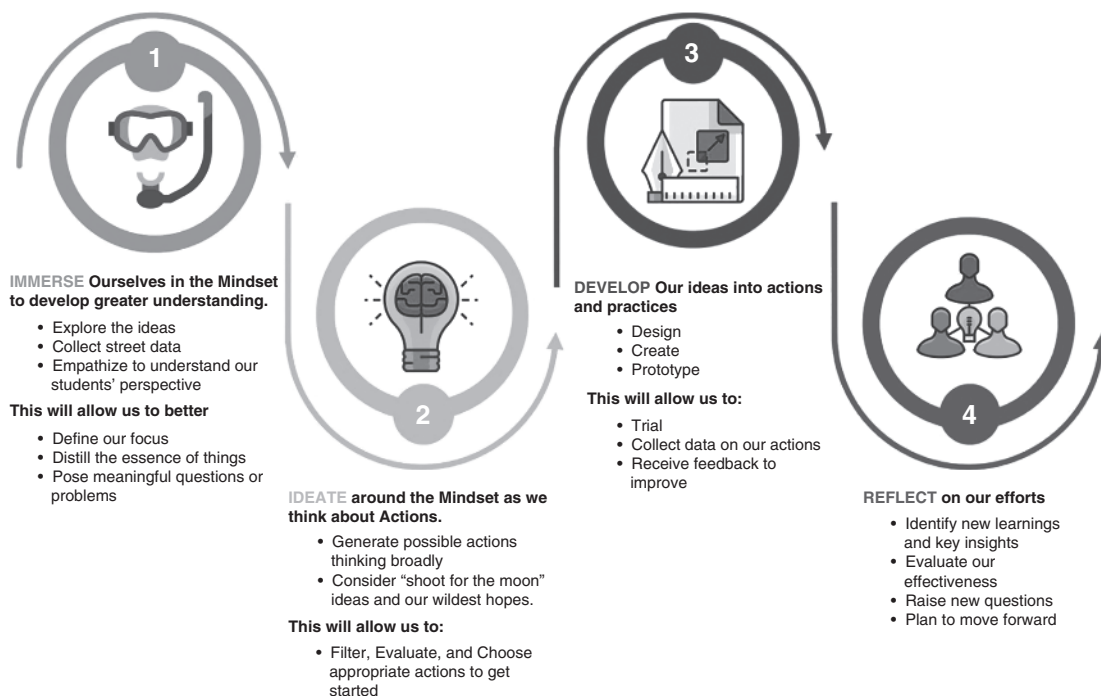
wanted us to create for our students. He aimed to move us away from “instructing” students in writing to authentically engaging *with* our students in the act of reading and writing in a mutually joyous and supportive atmosphere. In the process, he helped us to notice and capitalize on the occasions for learning that would emerge from these conditions.

I recall, for some, this felt too slow. They were eager to plan out their year and wanted to be handed tools and structures rather than experience them. It took time for them to embrace the radical authenticity Don was providing us. For the more experienced teachers in the group, it was a radical departure from traditional trainings, but they leaned into it. During the week, I learned to support others and offer ideas to push them and move forward even as they did the same for me. We developed strong bonds of trust emerging from our mutual vulnerability and risk-taking. It’s no surprise then that this week-long, summer workshop transformed my teaching. I didn’t just learn how to teach writing, but also to think like a writer and support my students in doing the same.

My learning extended beyond my teaching of writing, however. As I engaged my students in the authentic work of readers and writers, sharing my thinking and experience, participating with them in the very processes, I recognized a disconnect with the way I was teaching mathematics. There, I was focused on teaching procedures and having students’ practice them. Where was the connection to do the real work of mathematicians? Where was the modeling of thinking and not just the demonstration of algorithms? Surely, mathematics could be taught and learned in a better way. This led me to pursue a master’s degree in mathematics education, which reshaped my teaching to revolve around problem solving and investigation. Donald Graves’ workshop not only made me a better literacy teacher, but it also made me a better teacher, period. It did this by offering me the chance to challenge many of the assumptions I had about teaching and learning. Assumptions based mostly upon my own experience as a student in school. I would later go on to develop an immersive week of mathematics inquiry for teachers modeled after the Donald Graves’ workshop. Once one has experienced a culture of thinking, it is hard not to want to share it.

Case Two: Cultures of Thinking Fellows. In the 2021–2022 school year, 22 teachers from Santa Fe, New Mexico, and Durango, Colorado, began a year-long collaboration as Cultures of Thinking (CoT) Fellows. Teachers joined as teams from their schools alongside a school leader. Fellows came together as inquirers into their own teaching and leading, drawing on the 8 cultural forces and the 10 mindsets for inspiration. The goal was to learn through dialogue, reflection, analysis, and action in a supportive context. Six meetings were held across the school year, hosted by the various schools in the network during the regular school day. Using a Design Cycle to guide inquiry (see Figure 1.2), the group immersed itself in developing both collective and individual understanding of a chosen cultural force the first semester and a mindset (from those discussed in this book) the second semester. Throughout the process, thinking routines and

Figure 1.2 Inquiry Design Cycle.



Design Cycle for Exploring Culture of Thinking *in* Action Mindsets

protocols were used to guide thinking and prompt dialogue. A key aspect of the inquiry relied upon collecting street data, trialing practices, and sharing emerging insights and questions. This culminated in a community-wide sharing event.

Having school leaders join not only deepened the inquiry, but also the commitment. The presence of leaders sent the message that they valued the learning taking place. David Perkins refers to this as “symbolic conduct,” that is, conduct that conveys a message beyond just the action itself (Perkins 2002). As one Fellow commented, “It was very helpful to learn alongside our principal because they could clearly see our interests, our attempts, and our goals. It gave us a common language and set the playing field a little more even. This helped us better understand and build empathy for each other.” Leaders were also able to leverage the Fellows as teacher leaders at their school.

Working across schools, cities, grades, and subject areas meant that there was an opportunity to challenge perspectives and step outside one’s experience. Erin Gaddis, an elementary science specialist from Rio Grande School, remarked, “Seeing the same people over a year is important.

You build up trust, safety, and relationships. You build an interest in other people’s goals and learn from their progressions. It also means you are excited to share about your own goals, challenges, and successes. You create a team who you are engaged with and who you can develop a conversation with. Seeing each other every month gives time to think, work, try, but then come back together to get support, be inspired, share, and learn.” This strong collegiality allowed individuals to question and challenge one another and move out of the safe and easy space of just sharing ideas through connected conversation (Nelson, Slavit, and Deuel 2012). Erin elaborates, “The group allowed me to embrace the challenge of tackling something that I could improve upon and not just working where I felt comfortable. This was a safe space to live in the unknown. It was okay to say you didn’t have all the answers.”

Veteran secondary science teacher William Neuwirth from the Mandela International Magnet School also used the opportunity to step into the unknown and learn from others. “Post-COVID I chose to focus on the cultural force of *environment*. I felt this was the perfect opportunity to thoroughly look at how the space was arranged, what went on the walls, the spacing and orientation of tables, where I stationed myself and students in the room, diversifying the sub-spaces, and more.” One aspect of the Fellowship that helped William imagine possibilities were the Snapshot Observations conducted at each meeting (see Appendix A). These 10-minute observations were an opportunity to reflect on one’s teaching. Rather than judging or evaluating the teaching, observers analyzed what they were seeing to gain a better understanding of the cultural forces and mindsets into which they were inquiring. As Erin put it, “The goal was not to judge, it was to see where we could be inspired and see concepts in practice in real-time, real-spaces, and real-people.”

Through his observations, William came to an important realization: “Collaboration and interaction are fundamental to human nature, and when facilitated well, can multiply thinking products.” As a result, he began to make changes by creating “a classroom with no straight passageways through, clustering of stations, no front, a center that is open and changeable, with walls showing their thinking.” Subsequently he found, “Students took agency. They became more involved in class. Their questioning and ability to connect improved. Keeping the environment open allowed them to step in.” You can read more and watch videos of these and other CoT Fellows by scanning the QR Code.

CoT Fellows Program Website
QR Code



Discussion. The preceding cases were well-designed and focused professional learning calculated to immerse teachers in new ways of thinking and to mirror the type of learning teachers were to promote in their classrooms. These opportunities did not occur in isolated PD sessions, however. Professional learning tends to be more effective when it sits within an embedded model of professional learning that allows teachers to inquire into their own teaching, supporting them in learning *through* their efforts (Coggshall, Rasmussen, Colton, Milton, and Jacques 2012; Croft,

Coggshall, Dolan, and Powers 2010; Pacchiano, Whalen, Horsley, and Parkinson 2016). Cohen and Ball assert that the knowledge and skill of teaching are most effectively learned in practice because “Teaching occurs in particulars—particular students interacting with particular teachers over particular ideas in particular circumstances” (2000, p. 10). It is no coincidence then that my week with Donald Graves was followed up with embedded learning facilitated by the Public Education Coalition of Denver and that the CoT Fellows program was conducted over the school year in an embedded way.

Such embedded learning opportunities are sometimes known as professional learning communities (PLCs). There is a wealth of evidence on the power of PLCs to promote teacher learning (Cochran-Smith and Lytle 1999; Stoll, Bolam, McMahon, Wallace, and Thomas 2006; Vescio, Ross, and Adams 2008). However, not all PLCs are created equal. Some are neither truly *professional* in nature, nor clearly focused on *learning*, nor true *communities* of practice. In some cases, they are just a way of grouping teachers for meetings, offering only a soft collegiality that rarely pushes the status quo. For a PLC to support teacher growth there needs to be robust debate, respectful challenging and probing of one’s practice, collective responsibility for the learning of colleagues, and a general de-privatizing of teaching (Owen 2014; Owen 2015). In essence, effective PLCs depend upon them being cultures of thinking for the teachers involved. This means incorporating 8 elements into their design. (Ritchhart, Church, and Morrison 2011). All of these were key components in designing the CoT Fellows program. They are:

1. Adequate time for inquiry;
2. Facilitative structures that guide conversations;
3. Common language to talk about teaching and learning;
4. Diverse perspectives so we can break with our assumptions;
5. A bias toward action;
6. Visibility through documentation;
7. Grounding in student work or classroom observations; and
8. A desire to push and challenge ourselves and our beliefs.

Reflecting on Current Practice

While school leaders are often at the forefront of creating a culture of thinking in schools, teachers themselves take an active role by respecting their colleagues, being open to new ideas, and approaching the act of teaching as inquirers. When leaders and teachers have the mindset that

creating a culture of thinking is a shared goal, they lay the foundation for the adults in a school to grow, innovate, question, take risks, reflect, examine, inquire, learn from, and learn with one another (Swanson 2014). Teachers are then able to create those same conditions for their students. Consequently, I offer the following two sets of reflection questions. The first set focuses on leaders (principals, coaches, directors of teaching and learning, team leaders, department heads, and others in any type of leadership position formally or informally), and the second set focuses on teachers.

Choosing Questions and Recording Responses

Different questions serve us at different times in our learning. Therefore, I suggest you read through the questions and:

- Identify one or two that speak to you now. Questions that might challenge you or take your thinking in new directions.
- Identify one or two you would most like to discuss with your colleagues.
- Circle and date the questions you select now so you can identify how your focus shifts with time and experience.
- Use the blank pages at the end of this chapter or your note-taking device to record your reflections.

Reflections for Leaders

- What are we currently doing to realize/create a culture of thinking for teachers? Be as specific as possible, avoiding generalities.
- What practices at our school are not congruent with this mindset or might be barriers to achieving it?
- How am I, and the school leadership team, modeling what it means to be a risk-taker, innovator, learner? When have I openly reflected on mistakes and new learnings? When have I solicited feedback to facilitate my growth?
- Create a vision of what a culture of thinking classroom would look like: engaged students, curiosity on display, lots of deep questioning, and so on. Now, where and how have you created conditions and opportunities like this for your teachers?

- Where, when, and how are teachers currently observing their colleagues? How much is structured and how much is informal? How might these opportunities be enhanced and supported to go deeper? If I can't answer this definitively, how can I find out?
- What does collaboration look like here? Is it deep, meaningful, and generative, or is it cursory and mostly focused on work alignment? What are my examples to support this assessment?
- Where are opportunities for teachers to drive, shape, and direct their professional learning? To what extent do teachers make meaningful choices in their professional learning? Where and how might we provide more?
- What norms, informal or formal, do we have for our interactions, discussions, and collaborations? If formally stated, how do we hold ourselves accountable? If informal, how is this working? How might we benefit from formally articulating our norms?
- As a leader, what am I spending teachers' time on? To what extent is this time generative and focused on exploring issues of teaching and learning?
- Which teachers at my school have grown the most over the last two years? What accounts for their growth?
- What might be blocking teachers at my school from being more innovative?
- Would teachers see their PLCs as supporting innovation, risk-taking, and growth, or would they say they are more work-focused?

Reflections for Teachers

- How am I currently helping and supporting my school to grow as a culture of thinking for teachers? What specific behaviors and actions can I point to as facilitating this process?
- What practices at our school are not congruent with this mindset or might be barriers to achieving it? How can I help call attention to these and work to change them?
- How am I tapping into the expertise of my colleagues to improve my teaching? Where and when do I seek out feedback, use colleagues as sounding boards, or observe others I want to learn from?
- When was the last time I took a real instructional risk in a desire to innovate, try something new, and disrupt the status quo? What did I learn? What supports do I need for that to happen more often?
- If I haven't taken a risk lately, why not? What is standing in my way? Is that a legitimate constraint or is it more my perception?
- How often am I reflecting on my own practice to better understand the effects of my teaching and the needs of my students? What structures have I found helpful in pushing my reflection deeper? What other structures, routines, or protocols might I try?

- In addition to reflecting on my practice, how am I examining the underlying assumptions directing my actions?
- Which teachers at my school could I talk to or observe who might challenge my preconceived notions of teaching and learning and inspire me to try new things?
- Where and when do I engage in conversations that cause me to question and explore my teaching? What supports me now or might encourage me in the future to be more exploratory and questioning of my teaching?
- How am I growing as a professional this year? What am I getting smarter about? If we expect students to achieve a year's growth in a school year, how am I achieving a year's growth as a teacher?
- How do I use documentation for my own reflection and to better understand my students' learning? Where and when do I share and discuss documentation from my classrooms with colleagues? What structures do or might we use to ensure a deep conversation?

DATA, PRINCIPLES, AND PRACTICES: *WHAT ACTIONS CAN WE TAKE?*

With a clear understanding of why it is important to create a culture of thinking for the teachers at a school that mirrors the culture we want to create with students, as well as a sense of how such a culture might look and feel, we are ready to move into action. Of course, we want our actions to be responsive to our context and help us to advance the culture of thinking beyond what is currently in place. The reflection questions in the previous section can be helpful in this regard. So, too, can the collection of “street data” that helps one understand the current state of things.

Collecting Street Data

Street Data

- Helps us understand our own context as well as students' perspectives.
- Is relatively easy and quick to collect.
- Can be immediately analyzed and acted upon straightaway.
- Is meant to inform and suggest action.
- Is NOT an evaluation or measure of success but a snapshot of practice.
- Can take many forms: observations, interviews, surveys, exit tickets, recordings, and so on.

In constructing any street data activity, consider: What might you learn from this data and how might you use it to inform your next actions? How will this data shed light on the status of things and help identify things that need to change or promising practices you can leverage? There is no limit to the amount of street data one might collect. The important thing is constantly taking stock of where you are both individually and as a school in promoting this mindset that schools must be cultures of thinking for teachers if they are to be cultures of thinking for students. This will allow you to continuously move forward.

Street Data Action One: A Survey of Professional Learning Opportunities. A method we have used in our ongoing work with schools is a survey designed to find out what kinds of opportunities teachers viewed as valuable, what they took away from each, how they might be improved, which have the most impact on teaching, and which had an impact on the culture of thinking being created at the school. You will need to create your own list of all the different types of professional learning opportunities both formal and informal at your school. Note: The key information is what opportunities were deemed most valuable to individuals and to the school culture and why. (See Table 1.1 for an example.)

In our case, we found that teachers greatly valued our opening session, an off-campus retreat, because it was an opportunity to informally reconnect and focus on our mission as opposed to the “work” of school. We also learned that the Snapshot Observations that teachers participated in were valuable because they allowed teachers to discuss real teaching and learn from one another (see Appendix A). These sessions were viewed as fostering reflection and allowing people to raise important questions about their teaching. Both activities were seen as contributing to the overall culture of the school. Coaching sessions, on the other hand, were seen as directly impacting teaching by those who participated in them. However, only a few did. We learned that structured and scheduled opportunities were seen as being more useful because they required people to commit to the learning.

No doubt, your list of professional learning opportunities will look quite different from ours, particularly if you are just starting this process. Perhaps your opportunities fall more into the informational learning realm. If this is the case, consider adding a few blank lines to let teachers identify other, perhaps more informal, professional learning they found beneficial. You might even create an open form in which you ask teachers to identify the five professional learning opportunities across their careers that most shaped them as teachers. In whatever way you frame this prompt, the goal is to gain information on teachers’ perceptions of their professional learning to help you plan forward.

Street Data Action Two: Teacher Reflection on Change. We used this street data instrument as part of a large-scale study with hundreds of teachers across multiple districts. It focuses on identifying ways in which teachers’ classrooms are changing because of their learning to create a

Table 1.1 Professional learning survey.

Please comment on each of this year's learning opportunities thus far. Name (optional): _____

<i>Name of each professional learning opportunity (formal or informal) in which teachers engaged</i>	<i>What did you find valuable and useful about this experience/opportunity?</i>	<i>What suggestions would you make for further enhancing this as a rich learning opportunity?</i>
<i>Opening Faculty Meeting/ Retreat</i>		
<i>Optional Book Study Groups</i>		
<i>One-on-One Coaching Sessions</i>		
<i>Snapshot Observations</i>		
<i>Pineapple Chart Observations</i>		
<i>Inquiry Groups</i>		
<i>Sharing Carousel</i>		
<i>Guest Speaker</i>		
<i>Reflection Journals</i>		

¹ Please place a star or asterisk * beside the two learning opportunities you feel had the most impact on your teaching.

² Please place a check mark ✓ beside the two learning opportunities that you feel contributed the most to creating a school-wide professional culture and common commitment to the goal of creating a culture of thinking.

culture of thinking. We asked a few simple questions and gave teachers 30 minutes to reflect in writing:

1. As a result of your focus on making your classroom a culture of thinking, how are your teaching, your classroom, and your students changing? What specific things might an outside observer notice?
2. What are some differences that might not be immediately obvious to an outsider, but are now evident to you?

We were interested not merely in what ideas and practices were implemented by teachers, but also in their long-term effects. Because we were working with hundreds of teachers, it wasn't possible to get into everyone's classroom. We also felt that teachers themselves were in the best position to identify how their teaching was changing. We decided to focus both on changes that were obvious, what an outsider might witness, as well as those that were less overt but still significant. Teachers identified such things as:

- *My students feel more comfortable sharing, their confidence levels are rising. Listening is another skill that is improving steadily.*
- *Children have a bigger sense of wonder about what is going on in the world around them. And this, in turn, increases their language skills, verbal communication, self-esteem, and confidence, and they are making better choices.*
- *An outside observer might notice that my students are allowed to maintain an engaged chatter in the classroom. There is a freedom for students to ask questions and discuss ideas that, as a less mature teacher, I might have been afraid of in the past.*
- *The children are stimulating each other on a different level. They are dialoguing more and sharing their thoughts about their work more.*
- *My questioning is different, in part, motivated by my interest in my students' thinking. I'm no longer just asking questions I know the answer to.*

Reviewed as a whole, major changes teachers noticed were in students' engagement, conversations, and increased curiosity. Teachers noticed their own movement toward deeper questioning. As a result of this data, we conducted further research into teacher questioning to better understand how it was changing in these classrooms.

Stating the Mindset as Principles for Action

Converting the mindset "For classrooms to be cultures of thinking for students, schools must be cultures of thinking for teachers" into principles for action is a way to further guide and direct one's efforts. Principles tell us what to do in a top-level, overarching way. Specific actions then connect to the principles to bring them to life. Based on a review of the research and drawing on our experience working with schools to create cultures of thinking for teachers, I offer the following guiding principles:

- De-privatize teaching so that teachers can learn from and with each other.
- Shift the types of professional conversations in which teachers engage from being primarily informational and work-focused to conversations that explore and inquire into teaching and learning.

- Prioritize time for teacher learning so that professional learning becomes part of the fabric of the school week and not a one-off event.
- Encourage innovation and risk-taking by normalizing mistakes, learning from practice, piloting new ideas, and designing prototype lessons.

You'll notice that each of these statements begins with a verb to help focus on actions that will set our direction. At the same time, the actions are not very fine grained. They don't spell exactly "what" we might do or the form each will take. We leave that for the next and final section of this chapter.

Possible Actions

There is no single way a culture of thinking for teachers at a school will look and sound. There is ample room for individuals to put their own creative stamp on things and bring in effective practices from other sources. The following actions are:

- Drawn from our work in schools as part of the Worldwide Cultures of Thinking Project.
- Placed under the related principle to help you focus on the driving motivation behind each action.
- Modifiable to fit your local context.
- Connected to the most relevant cultural forces to which each specific action is associated. Both frameworks, the 8 cultural forces and the 10 mindsets, are synergistic, and you can begin your journey either place.

De-privatizing Teaching. Teaching can be lonely. Despite being in the presence of students all day, we are generally the only adult in the room. This can make it hard to learn from colleagues and to develop a collective identity as teachers all committed to developing a culture of thinking for teachers and students. When we de-privatize teaching, we strengthen the bonds between teachers, prompt grounded reflection on the complexity of teaching and learning, and create support for risk taking and innovation. To de-privatize teaching, we need to make formal and informal observation in each other's classrooms a common occurrence. We must create space for reflection and questioning of teaching and learning. But how do we accomplish that within the business of schools? Some strategies we have used include Snapshot Observations, Learning Labs, and Open Doors.

Snapshot Observations. Whenever I talk about teachers observing in one another's classrooms, it is generally received positively. Many mention how much they would like to see others teach. However, in practice, getting teachers into one another's classrooms rarely happens. The reason for this is that our typical model for peer observation is cumbersome and time-consuming. Furthermore, while most teachers want to observe others, only a few want to be observed. Many teachers fear the evaluation and judgment that might occur and so anticipate long hours of preparation to design perfect lessons. The Snapshot Observation seeks to upend these two impediments (see Appendix A). As the name suggests, a Snapshot Observation is brief, just 10 minutes, though the follow-up discussion with colleagues can take up to 40 additional minutes. Second, the Snapshot Observation is not meant to evaluate or even provide feedback for the observed teacher. Rather, the Snapshot is an opportunity for the observers to use their observations to reflect on their own teaching and raise questions for examination. It is a mirror in which one can reflect on one's own teaching. The observed teacher is not a part of the conversation, but merely offers colleagues the gift of opening their classroom as the basis for reflective dialogue. Thus, the observation and discussion become easier to schedule. The Snapshot Observation itself focuses teacher attention on *routines*, *expectations*, and *opportunities*. Another cultural force may be chosen to add to the focus of the observation. In carrying out the Snapshot, teachers are using a protocol to structure their time and make the most of this opportunity for reflection. They also are developing a common language to talk about teaching and learning.

Learning Labs. Labs are designed to build a sense of collaborative planning, collective ownership, and communal problem solving around new ideas. A Lab consists of three phases: design, observation, and discussion, which generally occur over three consecutive class periods (see Appendix B). In the design phase, the group collectively plans a lesson focused on content from the host teacher. The idea is to try something new, often a thinking routine (Ritchhart and Church 2020; Ritchhart, Church, and Morrison 2011) as a prototype lesson that can be piloted. The observation is the heart of Lab experience. During this phase, the host teacher carries out the planned lesson. The facilitator of the Lab may also act as a coach during the lesson as needed. Observers act as documenters of the learning, collecting data that can then be discussed later. They are not evaluators, but co-learners with the teacher trying to better understand students' thinking and learning. In the discussion period, observers share their documentation and explore its implications. The focus is on understanding the lesson design and how it helped to promote students' thinking. All participants reflect on how they might adapt the thinking routine or techniques of the lesson to their own contexts. Relevant cultural forces connected to this action include *modeling* (done informally by the host teacher and by the facilitator acting as a model of reflection), *opportunities* (to plan and reflect with colleagues), *time* (to engage in teacher planning at the lesson level), *routines* (as the Lab typically

focuses on planning and trialing a new routine), and *language* (for talking about teaching and learning).

Open Doors. At the International Academy in Troy, Michigan, the development of a culture of thinking was led by a core group of teachers. They immediately recognized that one of their key goals was to get teachers talking about teaching and learning and the 8 cultural forces. They started an *Open Doors* initiative by hanging a cultures of thinking logo featuring the 8 cultural forces on it outside their doors, indicating that anyone was welcome to stop in and see what they were doing and perhaps have a chat with them later. It was informal and invitational. Others have used charts kept in the staff room to identify teachers who are trying something and are willing to have anyone observe informally. These are sometimes referred to as “pineapple charts” since the pineapple is a symbol of hospitality. Others have used the teacher-initiated #ObserveMe movement as a way of inviting colleagues into their classrooms and soliciting feedback (see Figure 1.3). All 8 cultural forces are connected to this action as the observation is an invitation to step in and observe how the cultural forces are being leveraged. It is an informal opportunity for learning through a naturally occurring model of teaching. There is also the opportunity for conversation and the development of a common language.

Shifting the Conversation. There is a lot of talk and conversation in schools, but is it productive, transformational talk? Is it discussion and debate in which ideas get pushed around, decisions made, and one viewpoint triumphs—or is it dialogue in which our collective meaning is enhanced? Is it nonthreatening sharing that preserves the status quo or does it invite challenging questions that move teachers into inquiry while building strong collegiality (Nelson et al. 2010)? Most importantly, if it is mainly superficial discussion, how do we move toward more of an

Figure 1.3 #ObserveMe.

Welcome

Please come observe.
I'd appreciate feedback on the following goals:



I'm working on the cultural forces of **Language** and **Interactions**
Specifically, I am trying to:

Ask more probing questions to encourage learners to think more deeply.

Please provide feedback on my goals through the QR code. #ObserveMe

inquiry-focused dialogue? Tools like protocols from the School Reform Initiative (<https://www.schoolreforminitiative.org/protocols>) and other places (Allen and Blythe 2015) can be helpful, as can setting group norms or ways of being. However, beware of putting too much weight on the shoulders of facilitators alone. Everyone in a group has responsibility for enabling this shift in conversation.

It can be useful to share the continuum of teacher's dialogic interactions discussed earlier with teachers to raise awareness of different conversational patterns. Nelson, Slavit, and Deuel (2012) identify four types of teacher dialogue: 1) disconnected and distracted talk, 2) connected talk, 2) exploratory talk, and 4) inquiry-based talk (see Appendix C). Teachers recognize that they have been a party to all four types of dialogue at one time or another. Identify the reasons why one might be disconnected in our conversation or only focused on the soft collegiality that characterize the connected conversation. Examine the way such talk limits learning. From this vantage point, examine what exploratory and inquiry conversation can offer us both individually and collectively. Identify how teachers might support one another in getting to that place. It is important that everyone take responsibility for shifting the conversation, not just the facilitator. It is also useful to know what one wants to look for, as well as to avoid, in conversations. Only then can we notice and name those elements as they appear.

In shifting the conversation toward more complex, substantive inquiry, we also must attend to developing our listening skills. At the most basic level, it is important to remove distractions (phones, computers, that stack of ungraded papers) so that we can really be present for others. Although being quiet and creating the space for others is important, listening is much more than that. As poet Alice Duer Miller states, "Listening is not merely not talking," it is "taking a vigorous, human interest in what is being told to us." It is through our active listening that we open the door for others to make their thinking visible to us (Ritchhart and Church 2020). In a study conducted by the leadership consultancy of Zenger/Folkman, good listeners were those who ask questions to clarify points of confusion as well as pose probing questions that prompt the speaker to reflect and check their assumptions. When people are really listening, the conversation feels collaborative rather than one sided (Zenger and Folkman 2016). In addition, good listeners offer feedback and provide suggestions, often through such tools as the Ladder of Feedback routine (Ritchhart and Church 2020). The most relevant cultural forces connected to this action include *language*, *routines* (using protocols to structure conversation), and *interactions*.

Prioritizing Time for Teacher Learning. There is never enough time to accomplish all we want in schools. Therefore, we must protect the time for those things deemed most important and valuable. As the previous research reviewed makes clear, protecting time for teacher learning benefits morale, increases professionalism, supports innovation, and enhances student learning (Darling-Hammond et al. 2017). Practically, this means making sure most staff meetings are

about learning rather than logistics. This will ensure that they are more authentic and engaging. When information needs to be delivered, consider using emails or videos. Ensure that learning is ongoing, sustained, and cumulative rather than episodic and disconnected. This means scheduling adequate time for teachers to engage in regular inquiry, in-depth discussion, and meaningful engagement at least every fortnight. Protect that time. Learning groups are most effective when they engage teachers across departments and grade levels. While it is not impossible for a learning group to consist of educators from the same department or team, the challenge is that such groups already have a “work agenda” and a set of tasks they must accomplish. When this is the case, too often, the work agenda will swamp and take over the learning agenda. As Steven Covey (1989) conveyed decades ago, the pressing needs of the immediate too often supersede the needs of the important. Thus, we shouldn’t confuse “working groups” or committees with “learning groups.” The former aims to complete a job or task, to implement something. The latter seeks to develop understanding of a question, problem, or issue through investigation, action, and reflection. Unsurprisingly, the most relevant cultural force here is *time*. In addition, we are thinking about how we will spend that time and what kinds of *opportunities* we want to create for our colleagues and ourselves.

Encouraging Innovation and Risk-Taking. When we focus on growth and improvement rather than implementation, we naturally move toward piloting, risk-taking, and learning through first attempts. On a practical level, this means a shift in language. Leaders, facilitators, and teachers should use the language of prototyping rather than implementing. A prototype is a first attempt carried out for the purpose of gathering feedback and learning from one’s efforts. Implementation implies that something is to be fully realized. Recognize failure as a learning moment, and regularly engage teachers in conversation about productive failures or First Attempts In Learning. Get in the habit of asking yourself and others: What is something new that you tried this week, and what did you learn from that first attempt? How will you use that learning to reshape or modify your next attempt? These questions set *expectations* for innovation. Relevant cultural forces connected to this action include *language, modeling, opportunities, environment*.

Fitting New Actions with Current Realities

I hope some of the preceding actions sparked curiosity, excitement, and felt like a call to action. We all need new ideas and possibilities to spur us on. In addition, powerful actions often beget other actions. Once the first thing happens, the second is not so hard, and, over time, new actions come to feel like the natural next step. At the same time, we want to avoid





a superficial implementation that simply wallpapers over existing problems or issues. Therefore, before you rush to implement the actions you are anxious to try, step back and think about what you are currently doing (see Figure 1.4):

- What practices need to be rethought considering this mindset?
- What actions, already in place, can be amplified and grown by applying some of the preceding principles identified?
- What do you need to stop doing altogether and why? Does it run counter to this mindset? Is it ineffective?
- What “moveable barriers” are standing in the way of truly living this mindset?

I use the term *moveable barriers* because it is often not worth our time moaning about mandates and policies that we have no control over. However, many of the barriers we face are of our own creation or are simply a part of the grammar of school that we have grown so accustomed to that we only assume they are immovable.

Figure 1.4 Amplify-Modify-Remove-Create.

Review of Current Practice: What do we need to...

 AMPLIFY	 MODIFY	 REMOVE	 CREATE

Conclusion: Our Theory of Action

We conclude our examination of this mindset “For classrooms to be cultures of thinking for students, schools must be cultures of thinking for teachers” by formulating a “theory of action” in which we hypothesize the likely effects of our actions. What are we likely to see as a result of acting on the principles we have laid out? This is not merely a hoped-for outcome, however. It is based on the research and experience upon which we have drawn. A theory of action can be useful because it clarifies both what we are doing and why we are doing it. As such, it identifies particulars we might look for to know when and to what extent we have been successful. One shouldn’t be too quick to claim success based upon mere implementation of any set of actions. It is only if those actions have the desired effects that we can declare some measure of success. In this spirit of tying together our actions with anticipated outcomes, I offer the following theory of action for Mindset 1. Use it if it captures the actions you plan to take and the outcomes you expect. If it doesn’t, feel free to craft your own theory of action that will better fit your context.

If we support and empower the adults in the school to continually grow, innovate, question, take risks, reflect, examine, inquire, and learn from and with one another, then teachers will create those same conditions for the students in their classrooms.

Notes
