

Schoolwide Thinking

Joseph Campbell observed in an interview that we often tell and retell stories, not to explain things, but to return to the experience. With each retelling of the same story, something new emerges—a crystallizing, perhaps, of the central meaning or meanings that exist within it but require the retelling in order to take form and surface. Our interviews with educators using Thinking Maps for their leadership practices invited them to go back into those experiences, retell them, and identify new learning and insights. From these interviews—the retelling of important, and sometimes intense, high-stakes experiences about shifts and changes across whole schools—major themes emerged.

It's interesting to note that in the experiences described to us, the people involved used Thinking Maps to facilitate the surfacing of their own and each other's ideas. In a sense, the maps became tools for visually telling and retelling the story of the experiences as well as representing the internal dialogue of each person's own thinking. They became vehicles for surfacing meaning, making connections, and formulating actions, because as we know, the brain constantly maps external experiences and remembers meaningful moments with the connective patterns of neurons. One school leader commented, "Thinking Maps have particularly helped me to be work smart when planning strategically in order to get ideas down on paper before deciding and moving forward."

In the integration of several different stories in this chapter, we see that transforming a whole school is possible when a language for surfacing thinking becomes the connective tissue between and among people, some of whom don't work directly with each other or even across the hall on a day-to-day basis. We can also begin to hear and see how educators who use the maps for their own personal-professional problem solving—in coaching and one-to-one contexts, or even in small-group meetings—are engaged at a new level after seeing Thinking Maps used across a whole community of learners and leaders. They experience, in the practice of using Thinking Maps, that the whole is greater than the parts as we weave the patterns of thinking together to bring clarity to complex situations without making simple difficult choices or distorting ideas to fit immediate needs.

In these retellings, the themes of clarity, efficiency, collaboration, empowerment, and sustainability emerged, and respondents expressed them explicitly. Clarity, in particular, continually surfaced as a theme when people were asked to identify the contributions Thinking Maps made to their leadership practice. Many of those interviewed expressed this explicitly as *clarity* and also provided related statements about transparency, coherence, and purposefulness. One teacher leader observed, "It helps me visualize my thoughts so I can convey them succinctly." An elementary principal commented, "The Thinking Maps force me to focus,

[force me to] be specific, and make me a better planner and questioner.” Lastly, as elementary school Principal Judy Kantor explained when working through a particularly difficult interaction with a teacher, “The Thinking Maps make things very clear in my mind and allow me to articulate it [the thinking] very well.”

The phrase “I see what you mean” could be adapted to express “I see what I mean.” Both phrases represent the value of using Thinking Maps for helping people to understand the meaning and intent of others’ ideas and to become more precise and clear about their own thinking. Dickmann and Stanford-Blair (2002) identify the brain’s capacity for consciousness, an awareness of self in relationship to others, as an evolutionary breakthrough that “enabled reflection about probabilities, possibilities, and options” (p. 126). For the individuals involved in this study, Thinking Maps supported and enhanced the brain’s ability to function optimally and consequently choose actions that positively influenced the individuals’ interactions with others. Evidently, too, the confidence, borne of the clarity people developed in the process of using Thinking Maps to formulate and communicate their thinking, fundamentally altered their stance in relationship to others regardless of role, thus impacting the culture of the organization.

Networks of Learning Relationships

The presence of these five themes in each of the previous case studies and in our interviews and surveys of school leaders was not limited to particular roles. Apparently, the ground on which people stood shifted when leaders introduced Thinking Maps as a language for educators in adult interactions as well as for young people in the context of student learning. A notable benefit of the use of the maps for leadership practices and organizational communication was its impact on the conceptualization of individual roles and relationships across the entire school community. Ken McGuire, principal of Bluebonnet Elementary School in Texas, described Thinking Maps’ impact on his work and his school in this way:

As far as my leadership, I continue to work to create effective communication and collaboration, help generate shared mission and vision, conduct meaningful and purposeful professional growth, direct problem-solving strategies, collect and analyze information, and manage the business of the campus. Thinking Maps have made me more effective in these areas. I now have a set of tools that establish a common language and help the staff recognize the kind of thinking we are doing. The maps provide process and help define purpose in the work of our teams and committees. (K. McGuire, personal communication, March 2, 2009)

Process and *purpose*, the dual benefits from using Thinking Maps for leadership practices that Ken identified, connect directly to the themes of collaboration, clarity, and efficiency. Sustaining the engagement of faculty members in a change process can be directly linked

to how meaningful they perceive the activities associated with it to be. As Michael Fullan (2001b) observes, “Purposeful interaction is essential for continuous improvement” across a learning community (p. 124).

The ability to facilitate such processes is critical to how a leader’s effectiveness is perceived and the degree to which a leader, leadership teams, and connective, distributed leadership will succeed in eliciting meaningful contributions from faculty. However, if only the titled or formally identified leader—the principal, for example—is adept at conducting interactions in this way, the culture remains hierarchically bound and paternalistic. Top-down leadership is from a time gone by, but leadership solely from the ground up can be equally detrimental. Another place must be found where flexible, coherent structures for high-quality thinking and communication can be consciously practiced and not be determined by role or position within the organization. Lambert (2009) asserts that when reciprocal structures are lacking, “the result is disengagement; apathy; and retreat into focus on the self, prejudice, and fear” (p. 11). Certainly, this is not a recipe for successful organizational improvement or individual growth.

Ken McGuire understood this and committed to developing a professional learning community that valued and empowered teachers and thus empowered him in a rich reciprocal, virtuous, and sustainable feedback loop. He said emphatically, “I learned that no school structure creates success for students unless it is founded on a climate that values and empowers the teachers who serve those students, and provides teachers with the tools and facilitation they need to do their job effectively.” Ken intuitively grasped what Dorothy Cohen (1973), a former senior faculty member of the Bank Street College Graduate School of Education, articulated years earlier when she observed:

Our educational system will not change until both teachers and children are perceived as human beings. Only a self-respecting, accepted, autonomous teacher, proud of her professional integrity, can relate to children in ways that will give children self-respect, acceptance, autonomy, and pride in their accomplishments. (p. 23)

Through Ken’s guidance, Thinking Maps became a common visual language throughout Bluebonnet’s campus; all members of the school community used them for all purposes associated with educating students. This included the collaborative work of the adults in improving their instructional practices (figures 6.1 and 6.2, page xx), solving problems, addressing challenges, and making decisions critical to the successful fulfillment of the school’s mission (figure 6.3, page xx). The Flow Map in figure 6.1, for example, highlights Bluebonnet Elementary School teachers’ effective use of this map to guide them in formulating the questions they needed to address as they considered the implementation of the Daily 5, a literacy strategy designed to engage students in activities to improve reading and writing skills. Each of the questions they identified would promote discussion and be supported by the appropriate map. The group generated the ideas in the Frame of Reference to keep in mind factors that would influence their thinking as they responded to the questions.

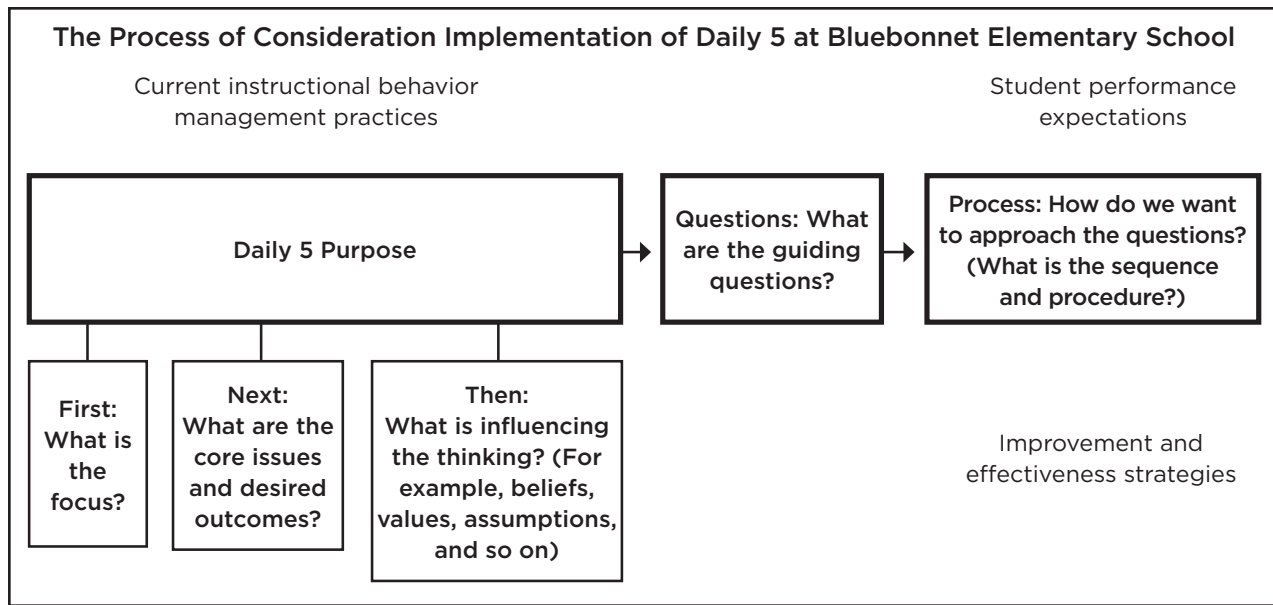


Figure 6.1: Sample Flow Map for instructional practice implementation.

Ken's use of Thinking Maps and his recognition of the importance of extending the use of these tools to all members of the school community fundamentally transformed the organizational environment. The reciprocal, purposeful interactions fostered by the use of Thinking Maps reframed the school's structure from one based on hierarchies to a "network of learning relationships" (Lambert, 2009, p. 9)—the essence of connective thinking and leading. Ken and his colleagues were deeply engaged in the process Lambert (2009) characterizes as "leading as a form of learning" (p. 9). Ken reflects, "We are still developing as a Thinking Maps environment, but each day we learn more ways to employ them as the conduit through which the learning and the business of our campus flows. *As an entire school community we are learning to think!*" [italics added].

Thinking Maps, Thinking Teams, Thinking Students, Thinking Schools

Let's investigate several schools where Thinking Maps became an unwitting catalyst for strengthening schoolwide leadership and increasing communication that also led directly to improved student learning outcomes. First, we consider the insights from a vertical team at Florence E. Blackham School in Bridgeport, Connecticut, where the maps had just been introduced the year before, and then those from Yates Mill Elementary School, in the research triangle of North Carolina, where Thinking Maps had been used as a language for students and teachers for over eight years. Both sites engaged in yearlong action research specifically focused on leadership with Thinking Maps as they became aware of the shift in how their schools were transforming.

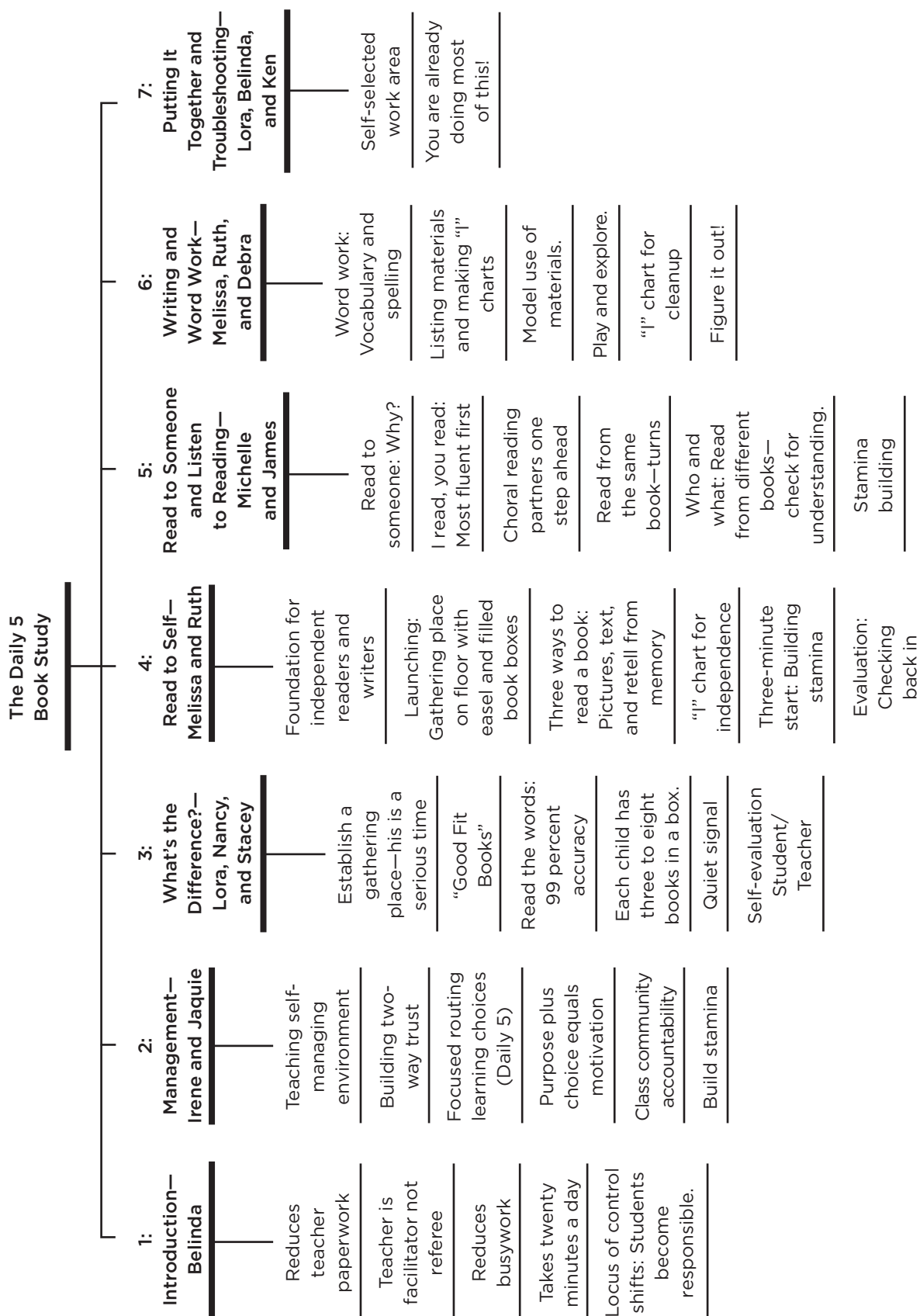


Figure 6.2: Sample Tree Map for book study.

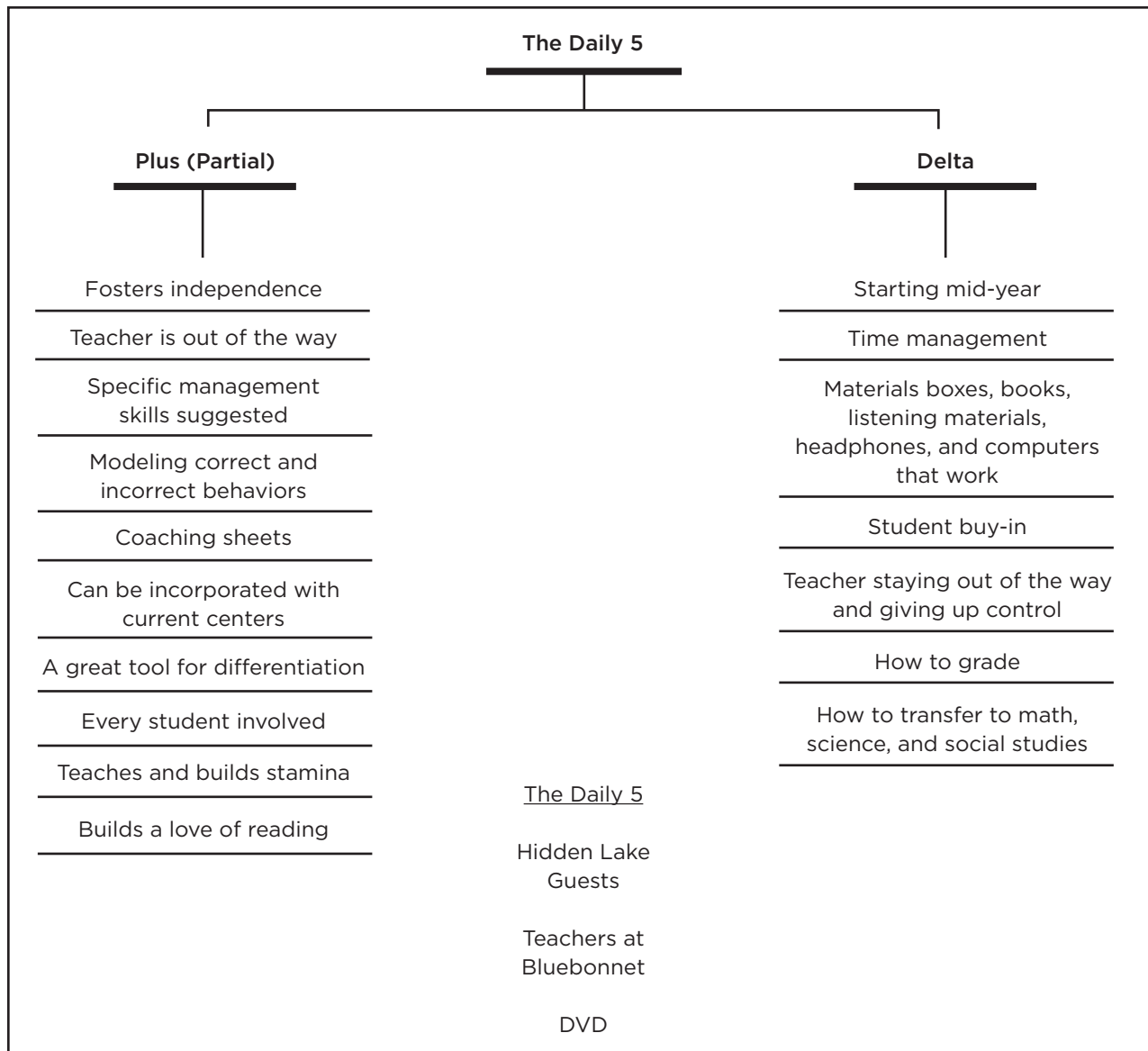


Figure 6.3: Sample Tree Map for the school mission.

A Language for Analysis and Reflection

In response to a series of statewide initiatives and in support of its efforts to improve student performance, the faculty at Blackham School undertook the formation of both horizontal and vertical data teams and the creation of processes for meaningfully and collaboratively engaging teachers in gathering, organizing, and analyzing data to improve instruction and student learning. The formation of the grade-level Horizontal Data Teams was a first step toward complying with the Connecticut Accountability for Learning Initiative (CALI), the statewide model of continuous school and district improvement that was created to close Connecticut's achievement gaps. The next step was the formation of the schoolwide Vertical Data Team. This team of teachers was responsible for data analysis and instructional and curricula decision making. It

comprised teacher leaders from each grade level and content area (representing prekindergarten through grade 8), the numeracy coach, literacy coaches, and the middle school's English as a second-language teacher. Members of this team noted that while no administrators were represented on the team itself, their active support of the team's work was critical to its success (Thinking Foundation, n.d.d).

Commenting on the early stages of this process, team members shared the following observation in their research report after following the protocols that the consultants from the Connecticut State Department of Education recommended.

These initial meetings included quite a bit of thoughtful discussion and the presenting of ideas and opinions on student achievement at our school. At times members left meetings with their own take on the discussion, leaving much to interpretation. By the next meeting, we relied on the summarization caught by the recorder as well as our own individual recollections. The need for a system that would allow the Vertical Data Team to capture these ideas and to arrange them in powerful, more visible ways in order to be more productive was evident. (Thinking Foundation, n.d.d)

A visiting educator, after observing a Vertical Data Team meeting, suggested that members consider using Thinking Maps to facilitate their interactions and the analysis of the data gathered. Having already seen the positive impact of the maps on student learning and communication within the classroom over the past year, the team decided to act on this suggestion with the hope "that use of the maps would lead to deeper discussions, increased participation of members, clearer goals, and improved efficiency within the Vertical Team, with the added benefit of a trickle-down effect to the Horizontal Data Teams" (Thinking Foundation, n.d.d).

As the foundation for the whole-school change effort, the Vertical Data Team decided to use Thinking Maps as a common visual language for the critical work of leading their school's commitment to continuous improvement. As a result, the team experienced the direct impact of this use of Thinking Maps for leadership purposes on several key areas of this effort: distributive leadership, communication, and student learning outcomes.

Distributive Leadership

Collaborative processes and the concept of *service leadership* were introduced into the Bridgeport Public Schools as part of an initiative to value and promote a professional attitude and improve communication. This initiative attempted primarily to expand the use of the talents, expertise, and commitment of the faculty members to deepen their involvement in decision making. The horizontal and vertical team structure at Blackham School was already aligned with the service leadership model's goal of building social capital throughout schools.

However, the school would determine how to implement this model. Since all teachers were already familiar with Thinking Maps as an instructional tool, the team decided to use them for its collaborative processes. As a first step, the team members used a Circle Map to define their mission (figure 6.4, page xx) (Thinking Foundation, n.d.d).

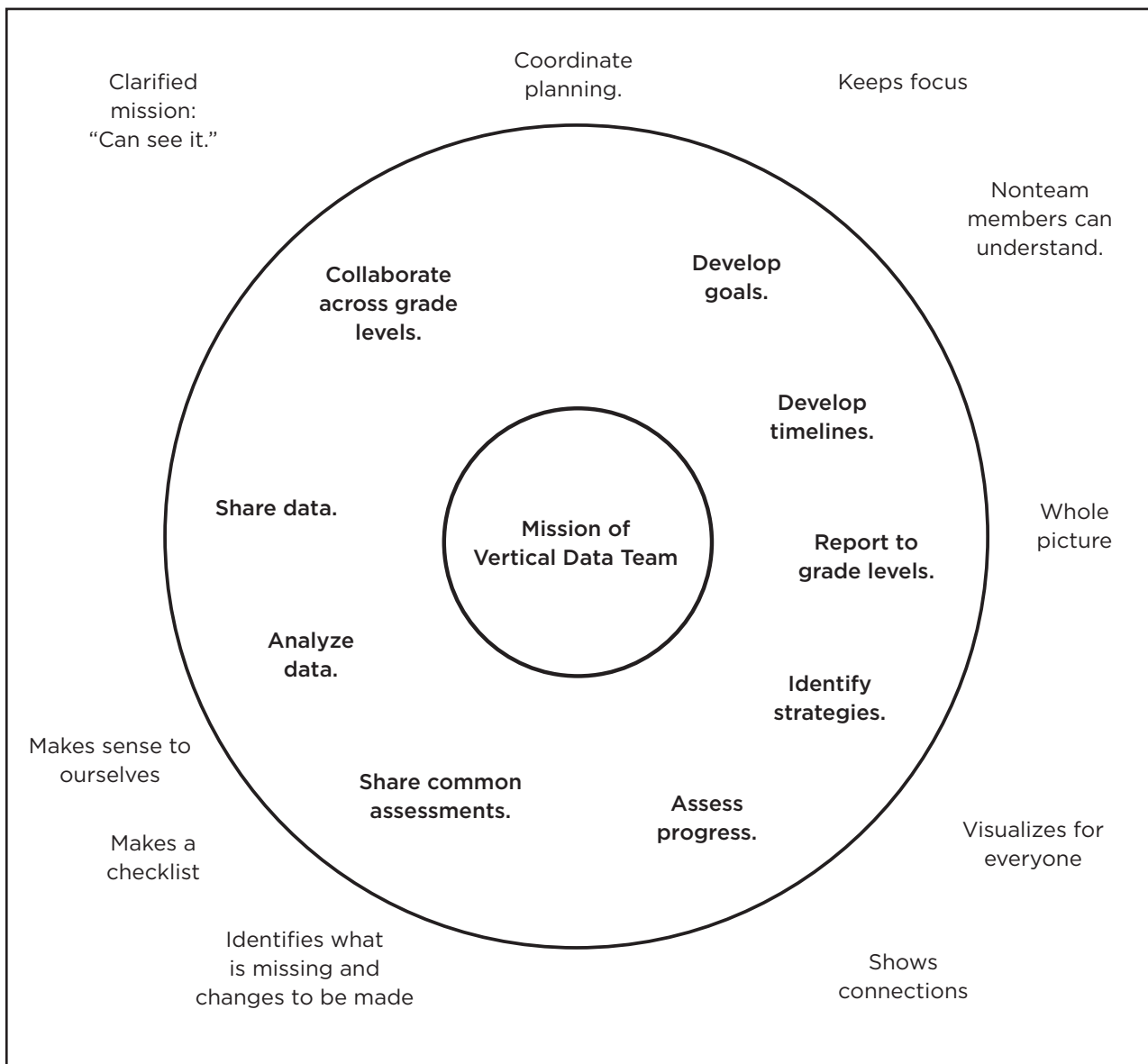


Figure 6.4: Sample Circle Map to define the school's mission.

In the Frame surrounding the ideas the team generated, members reflected on the process and identified specific ways in which the use of the Circle Map contributed to this effort. The team identified clarity and engagement—the ability to visualize the whole picture and *see* the patterns in order to make the necessary, important connections—as significant contributions, enabling all members of the school community not on the team to see and understand the ideas.

From this Circle Map, the Vertical Data Team formulated its mission statement.

The mission of the Blackham School Vertical Data Team is to collaborate schoolwide, share and analyze data, create common assessments, impart strategies, and develop timelines to achieve set goals in coordination with Horizontal Data Teams. (Thinking Foundation, n.d.d)

The success the group experienced with this initial application inspired its members to develop an action research project (with support from the Thinking Foundation) with the expectation that the proposal would allow them “to examine the ways in which using Thinking Maps as a leadership tool could support the development of distributive leadership skills and improved communication in the service of increasing student outcomes” (Thinking Foundation, n.d.d). Because the use of Thinking Maps coincided with the beginning of this collaborative structure, the maps became the primary language, or common set of tools, for deeper, visual thinking. The group immediately felt the impact of their use:

[Thinking Maps] enabled us to organize the overwhelming amount of ideas and thoughts generated by a team of twenty-two people. The beneficial focus of our action research project facilitated the inquiry and discussion of real problems facing the Vertical Data Team and their solutions. (Thinking Foundation, n.d.d)

With the maps, teachers—some with limited leadership experience—could participate in and actually facilitate collaborative processes in skillful ways. The group and its individual members developed confidence in their ability to use the vertical team structure efficiently and effectively to address the complex task of transforming data into meaningful instructional decisions for the school.

Using Thinking Maps quickly began to fulfill a variety of logistical and analytical purposes. During their team meetings, for example, the educators began by using Flow Maps to form the agenda (Thinking Foundation, n.d.d). (See figure 6.5, page xx.)

The team used other maps to:

- Define and set goals (Circle Map, Tree Map)
- Schedule and assign team tasks (Flow Map, Tree Map)
- Communicate data (Tree Map, Double Bubble Map)
- Generate ideas (Circle Map, Tree Map, Bubble Map)

After using Thinking Maps to define its mission and then to identify specific goals, the Vertical Data Team continued its reflective process and decided to explicitly address the question, What would the causes and effects be if our Vertical Data Team functioned at a high

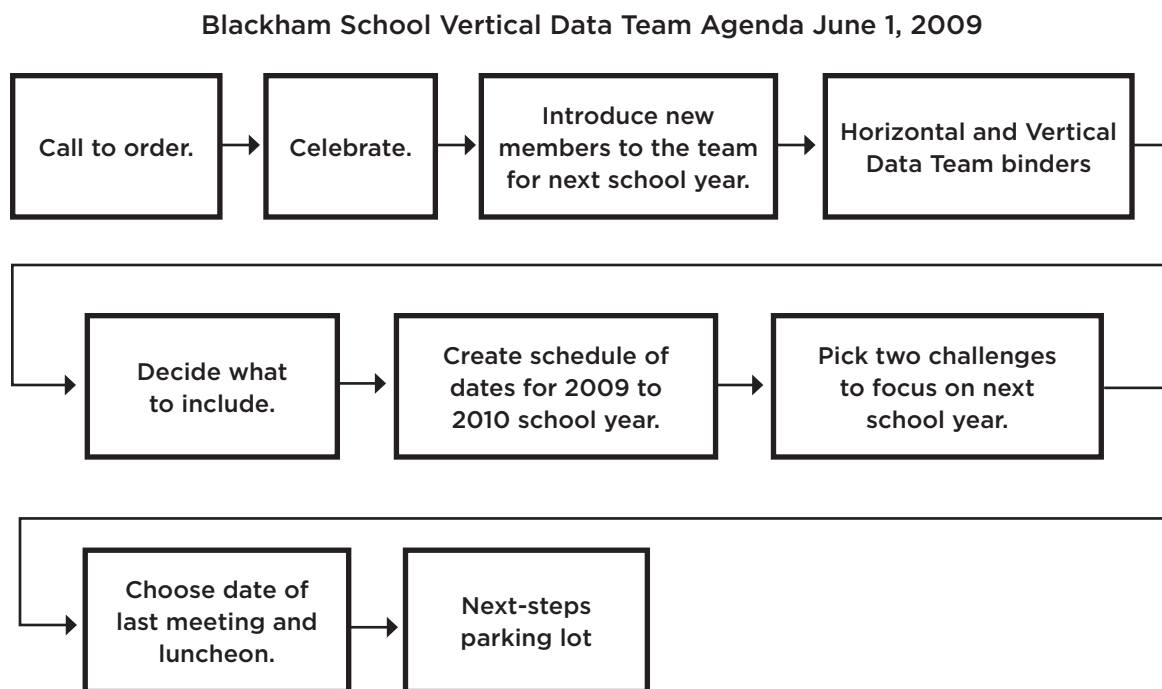


Figure 6.5: Sample Flow Map for a team's agenda.

level? Posing this question and using a Multi-Flow Map to generate responses enabled the team members to formulate a clear sense of purpose for how to effectively achieve their goals and fulfill their mission—and identify what it would look and sound like if they did (Thinking Foundation, n.d.d). (See figure 6.6, page xx.)

Encouraged by their success in the Vertical Data Team context, the Blackham School Vertical Data Team members were now determined to expand the proficient use of Thinking Maps within the Horizontal Data Teams to deepen discussion, increase the efficient working of the teams through the active participation of their members, and set clearer goals. They commented, “We expect these actions to foster the growth of more social capital within the building” (Thinking Foundation, n.d.d).

Communication

The professional development the Vertical Data Team members received in Thinking Maps specifically focused on leadership applications, along with their previous exposure to the work in the classroom context, proved useful as they progressed toward using the maps as a common visual language to communicate ideas and multiple points of view. This is important to highlight: *the same language for learning across the school became a language for leading thinking across the school*. Once the Vertical Data Team members had determined to use Thinking Maps to support their efforts to pattern information and see interconnections between ideas, they continued with increased confidence to tackle the more complex tasks of formulating their mission statement and putting it in motion.

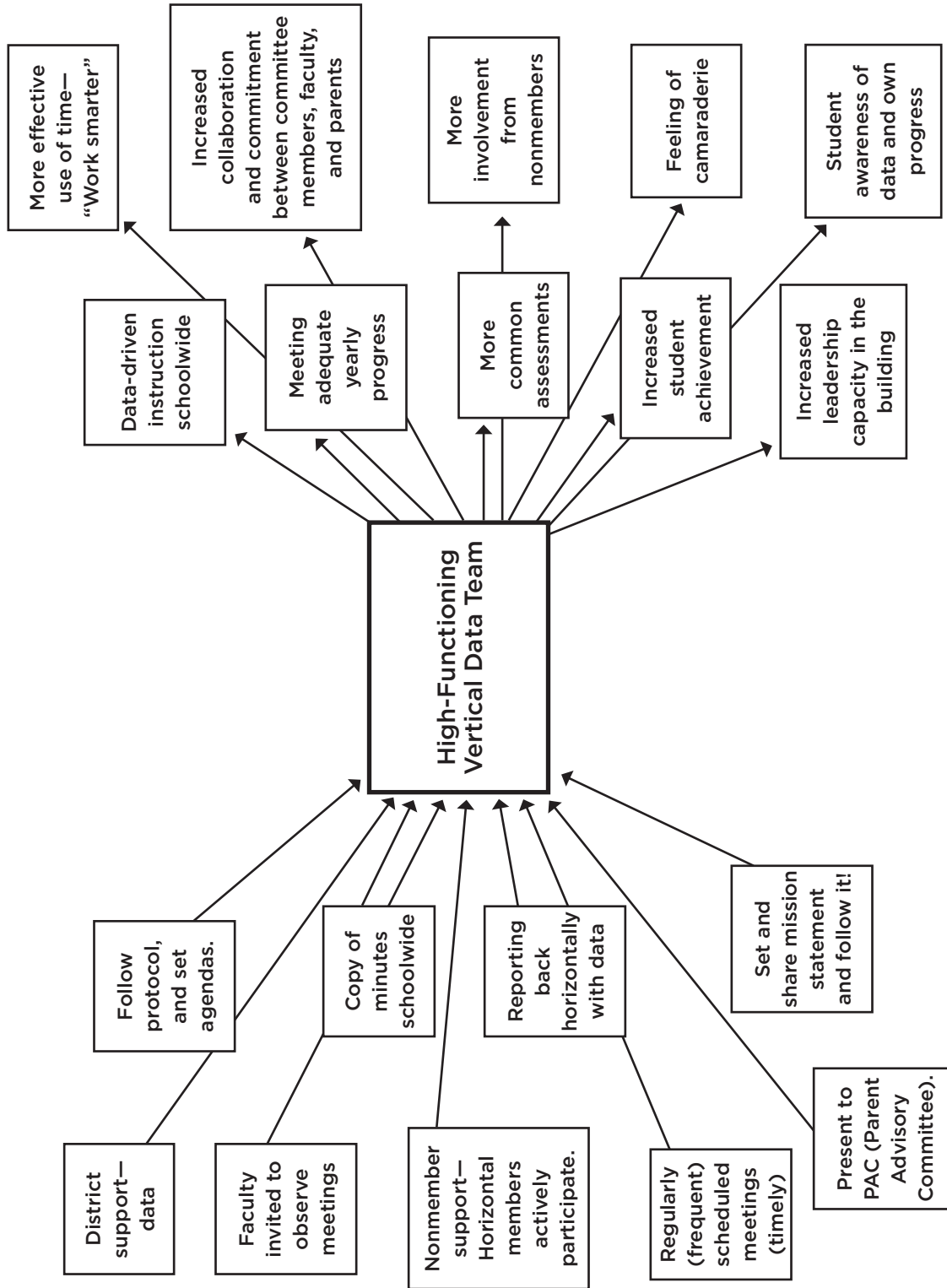


Figure 6.6: Sample Multi-Flow Map for a team's mission.

- *Recording* their schoolwide SMART goals
- *Displaying* their progress in reaching those goals
- *Communicating* those findings in open communication with various Blackham School stakeholders: teachers, students, staff, parents, community members, and any other individuals concerned about the success of their students

The Vertical Data Team was charged with the task of analyzing Connecticut Mastery Test (CMT) data and determining the areas that were cause for celebration or concern. The results of these common formative assessments were displayed as they related to progress toward the school's SMART goals (goals that are strategic and specific, measurable, attainable, results based, and timebound for reading and math) with a Tree Map. This simple format allowed all staff and visitors to see on one page the full array of areas of strengths as well as challenges and to look for patterns across grade levels. Prior to using the maps, the team relied solely on the minutes of the previous meetings for data recollection and further communications with other schoolwide stakeholders. As the team members explained, "Each Horizontal Data Team had shared its common formative assessment [CFA] results using different formats, such as bar graphs, pie graphs, and numerical percentages." The use of a Tree Map enabled the teams to display data uniformly, with each grade level and content area's data for CFAs visible in one large data wall (Thinking Foundation, n.d.d).

All of the stakeholders could readily view and access the information in the data wall, located in their conference or resource room. However, unlike a wall that can be experienced as a barrier, the uniform display of the data using Thinking Maps supported people's ability to see the big picture, something the team felt had been missing from its previous processes. Transparency occurred not only in the presentation of the information but also in the manner in which the maps enabled people to see through and across data points and make connections. The team achieved its goal of having people use a common visual language to pattern information and link ideas as they processed the information individually and collectively. The visual and cognitive nature of the maps allowed for clear communication of the information and made the opportunity to identify trends more apparent and possible. A simultaneity in the *seeing* and *thinking* about the data is unique to the language of Thinking Maps.

Learning Outcomes

In our work with Thinking Maps across many educational settings, administrators frequently talk about the unintended or unforeseen effects of the implementation of the maps. Many report that while their initial intent was to directly impact student performance, deeper, more lasting changes have occurred. Stefanie Holzman, former principal of Roosevelt Elementary School in Long Beach, California, expresses it this way:

What I didn't realize and could not foresee were the deeper effects on the development of teachers. . . . I discovered that from an administrator's point of view, Thinking Maps did much more than what I had understood from both

practical and theoretical points of view . . . there have been shifts in the culture and climate of our school, most obvious in the quality of professional conversations that now rise to the surface. (Holzman, 2011, p. 119)

Interestingly, the Vertical Data Team at Blackham School elected to use Thinking Maps for leadership purposes to *intentionally* create the very same shift that Holzman describes as an unanticipated by-product of using Thinking Maps in the classroom. The Blackham School team discovered through its efforts, however, that the leadership use of Thinking Maps had the unintended consequence of improving instruction in the classroom while promoting skillful participation among faculty in the leadership of the school. They reported:

The use of the Thinking Maps as a leadership tool in our Vertical Data Team has both directly and indirectly affected student learning outcomes at Blackham School. For example, the discussions fostered by the use of the Maps have allowed teacher-leaders to share effective instructional strategies. When our Vertical Data Team brainstormed effective strategies to support our Reading and Math SMART goals, we displayed them in a Circle Map, which was then shared with the Horizontal Data Team. Those teams added additional ideas to the map. By compiling detailed examples of these strategies and lessons in a binder, teachers will be able to access what they and their colleagues have determined to be the most effective strategies to attain our school's academic goals, providing them a way to expand their teaching repertoire without resorting to the tendency to "go it alone" and "reinvent the wheel." With increased use of these effective strategies, we expect to see an increased student achievement in our targeted areas. (Thinking Foundation, n.d.d)

The Vertical Data Team described an additional benefit: the increased use of Thinking Maps as a leadership tool in the Vertical Data Team and Horizontal Data Team led to an increase of their use in the classroom. With improved familiarity and a greater degree of fluency, teachers and students were using the maps in more complex and independent ways. Not only did use of the maps help students unite in using common strategies but the wide variety of maps for student learning and as higher-order thinking tools also provided teachers with the means for automatic differentiation for all learners. As one teacher noted:

[Thinking Maps] not only provide continuity and structure, but also allow students to maintain focus on the task at hand, providing them with the ability to collect, organize and process information. Students can make use of maps on various subject matter and topics and interchange them within cross-curricular activities. They are valuable in providing the students with a sense of feeling confident in their academic achievements. (Thinking Foundation, n.d.d)

The use of Thinking Maps influenced learning at all levels of the school community—faculty as well as students. For members of the faculty, the use of the maps for professional interactions significantly impacted the confidence and dexterity with which they could use the maps with their students. Their growing comfort in using the maps for complex processes as part of their data-team interactions emboldened them to expand their use in the classroom, just as their students’ use of the maps allowed them to approach learning with greater confidence and enthusiasm.

A final benefit that the Vertical Data Team reported once again echoed the observations that Stefanie Holzman (2011) made regarding the change in the professional discourse she observed in her school. The principal investigators for Blackham noted:

Other benefits have been achieved through increased reflection between teachers and coaches. Interpreting classroom data with another professional not directly connected with the students can help teachers gain a new perspective as they strive to determine what might be the most effective instructional practices for the desired learning outcomes. (Thinking Foundation, n.d.d)

For the teacher leaders at Blackham School, Thinking Maps were not simply a convenient way to visually display information. They promoted a *collaborative process* that fully engaged their intellects, developed their leadership skills, and enabled them to achieve their ultimate goal of improving student learning. As a final observation, they said:

We are encouraged by the growth of our strong professional learning community, empowering teachers as leaders via the Vertical Data Team, and initiating the use of Thinking Maps as a strategy to organize and communicate goals and objectives for the school. We feel the maps have helped drive instruction and have had a direct impact on student learning. (Thinking Foundation, n.d.d)

“Out of the Auditory”: A New Kind of Meeting

When asked to identify how Thinking Maps have impacted her staff’s interactions with her and each other, Lynn Williams, principal of Yates Mill Elementary School in Wake County, North Carolina, stated, “Staff meetings are fundamentally different. The use of maps makes us more objective—*out of the auditory*.” We could easily have mistaken such an interesting phrase for the more familiar “out of the ordinary.” In fact, Lynn’s intended meaning was the same regardless of how we heard it. She described how people get lost in the emotional sound of words, losing “sight” of the goals and reasons for their actions and focusing instead on each other. Without the visual, Lynn pointed out, hidden assumptions and misunderstandings are

more likely to alter the conversation and influence the decision-making process. Most (ordinary) meetings, she observed, are dominantly auditory and as a result particularly vulnerable to miscommunication and a lack of clarity. “A climate of a school is often rated by the non-discussables—we don’t have these misinterpretations,” Lynn noted. “When a school has good communication, you don’t necessarily know it. But when a school does *not* have good communication, you *know* it.” Good communication, Lynn concluded, is not just about creating a friendly atmosphere. It allows teachers to “put their brain power to teaching and learning.”

At Yates Mill, educators have used Thinking Maps for over six years as a foundation for high-quality teaching and learning and occasionally for communication and leadership practices. The past few years saw a much more explicit use of the maps for improving communication, problem solving, and decision making during meetings. Using Thinking Maps in meetings allowed the faculty to examine trends, identify patterns, and keep focused on the goal. The maps made the data more readily discernible and thus enabled the faculty to make more data-informed decisions. Lynn observed, “Teachers do a better job responding when the information is easily accessible.” She wanted teachers to see where things connected, something she said a Tree Map, for example, enabled them to do quite readily. “In a map,” she noted, “you can see the information immediately. More information can be processed and retrieved quickly and the data can be used efficiently and effectively.” Lynn described a meeting in which the faculty was planning the implementation of the Daily 5 reading program. “We asked the questions, created a Flow Map, then a Tree Map grouping where the materials were. We have all these materials. Students need books and teachers wanted to make sure they had enough books.”

Teachers needed to decide where to begin the implementation. They began the process with a Flow Map, retracing the steps leading to the decision to implement the Daily 5 and reminding themselves of their intended purpose. Then, Lynn added, they constructed a Tree Map, identifying all the places where the materials were located. One teacher proposed distributing the books to the first graders. Sensing the prematurity of this solution, Lynn drew their attention back to the information in the maps they had created:

I reminded the group that the reason we were distributing these books is that they [students] need to have a lot of books to read. I said let’s decide deliberately. We looked at the Tree Map and what folks were assigned to do at each grade level and decided to start with the newest teachers. We had a plan.

By returning teachers’ attention to the maps and objectifying their intended purpose, Lynn enabled the group to see patterns that might otherwise have been less apparent. She observed, “By the time the faculty walked out of the meeting with Tree Map in hand, it was clear what each person’s job was and the next steps. There was no ambiguity—they had it down.”

Thinking in Maps

This use of Thinking Maps for leadership practices that Lynn modeled so effectively was transferred to the teacher leaders she worked with at Yates Mill. One such teacher leader described her “aha!” moment in the use of Thinking Maps for her responsibilities as a leader of a Vertical Data Team meeting that occurred at a summer faculty retreat. Although she had noticed many opportunities to use the maps to explain different processes related to instructional initiatives the faculty had been discussing, not until she had to communicate information to her colleagues did she experience the value of this use of Thinking Maps:

I was typing the minutes as I had done for previous meetings I had with teams and thought this was the perfect opportunity to display the information in Thinking Maps instead of my usual form of capturing what was being said at the meetings.

She began the Vertical Data Team meeting with a Circle Map (figure 6.7, page xx) to record people’s expectations for these meetings, new to their school.

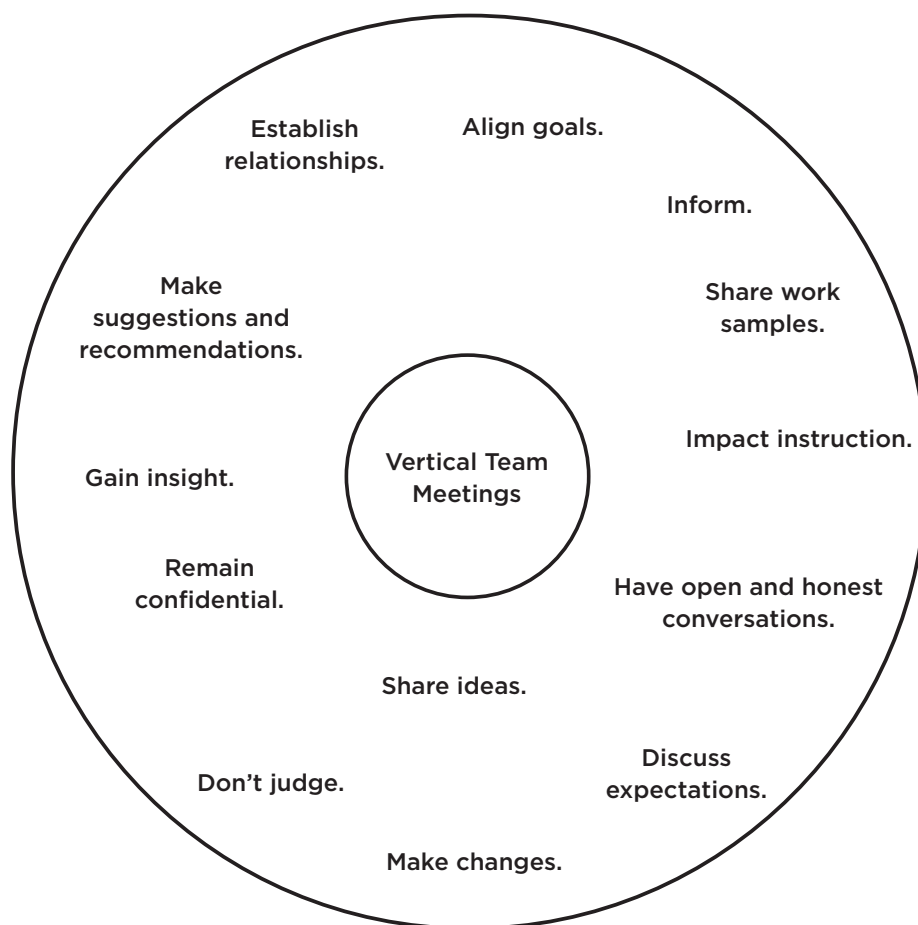


Figure 6.7: Sample Circle Map to record meeting expectations.

This simple act of putting pen to paper, of actually constructing a Thinking Map in the moment, secured the use of these tools in her mind and in her practice. Lynn described, “From there I just kept thinking in maps. It was *natural* to go into a Tree Map to display the successes and challenges at each grade level.” (See figure 6.8, page xx.)

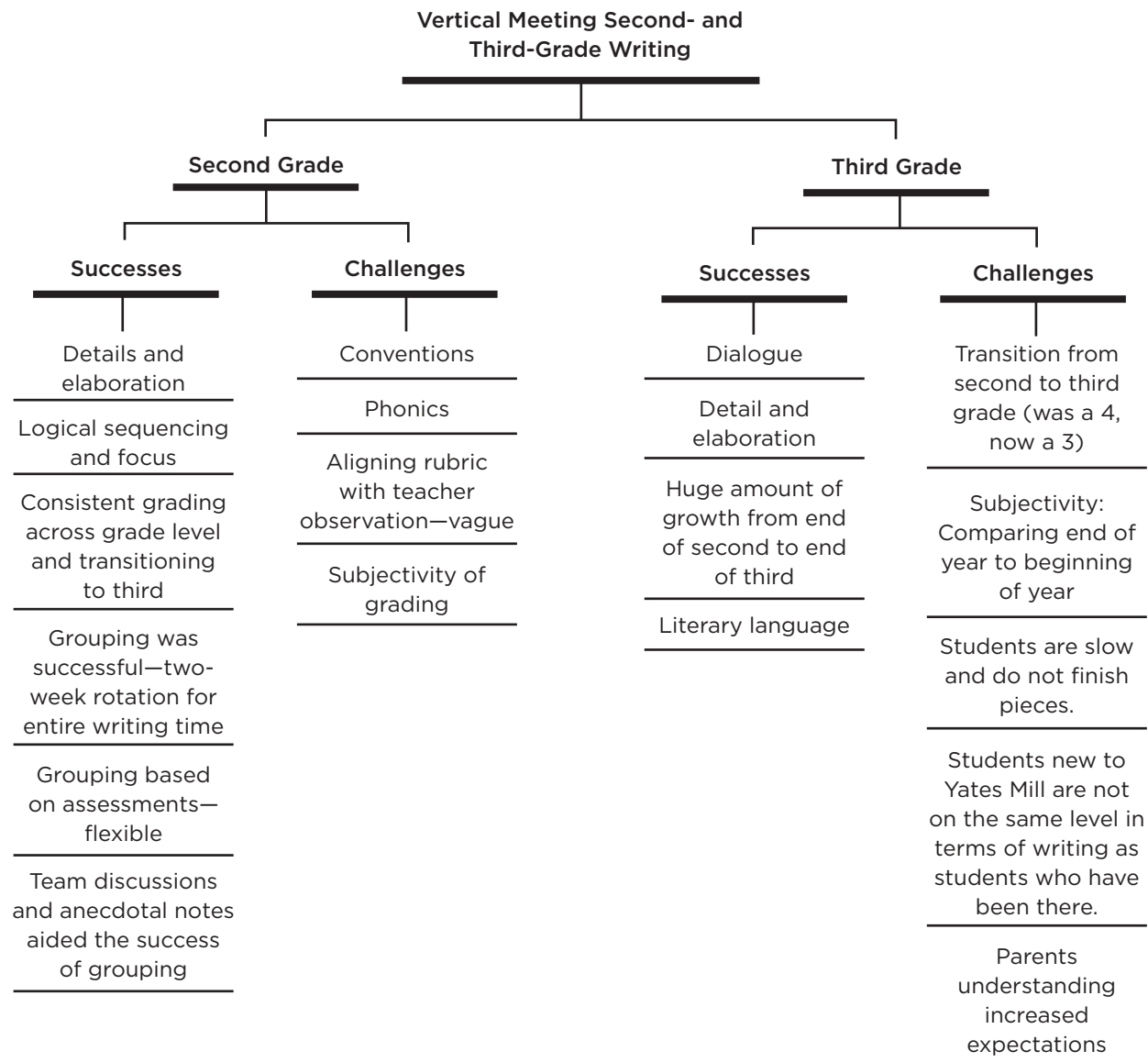


Figure 6.8: Sample Tree Map to analyze grade-level challenges.

As discussions developed from the use of maps, Lynn realized which other maps and, more precisely, which thinking processes, would support the group members in developing a deeper understanding of a particular topic. For example, after members of the third- and fourth-grade team completed their Tree Map using student work samples to help identify the successes and challenges of implementing a guided-reading approach at each grade level, they constructed

a Double Bubble Map to compare the results from the two grade levels to see what patterns would emerge (figure 6.9, page xx).

Commenting on the impact this had on the group, Lynn observed, “It came naturally and the teachers responded well to that as opposed to just a couple of pages of minutes of what had been said.” As for its impact on her skills as a teacher leader, she noted, “Now, when I’m discussing or planning things with other leaders or teachers, I naturally think in Thinking Maps.”

Developing Empowerment

Because Thinking Maps are rooted in the application of fundamental cognitive skills to developing meaning and understanding, inquiry processes are ideally suited for their use. The professional learning community setting, where groups of educators collaborate in pursuit of understanding student learning and developing effective instructional practices, is enhanced when Thinking Maps are used as a common language among participants. “Thinking Maps give us a structure so that we can problem solve together,” Lynn commented. “We ask questions, and the analysis we do is very deliberate and purposeful.” Such interactions are, by their very nature, empowering for the group as well as the individuals involved. Uncertainty about a situation becomes an opportunity for learning. The maps provide a common language and a tool for faculty to engage thoughtfully and confidently in pursuit of understanding. Importantly, because no set sequence exists for using the maps, and we often use multiple maps together, this common language becomes a natural extension of fundamental patterns of thinking writ large within the distributive, connective practices of leading thinking across the whole school. Recalling the first time she participated in Thinking Maps training, another teacher leader at Yates Mill excitedly observed, “This is what my brain does. This is a picture of what happens in my brain when I encounter information.”

The maps add to and are different from some more traditional and effective normed meeting processes that often become stale and clunky because they lack dynamic flexibility related to surfacing creative and analytic thinking in the moment. As this teacher began to use the maps in collaborative processes, she commented on team meetings in which participants used the maps to facilitate interactions: “Everybody comes away with a clear, common picture of what we’re experiencing versus just their own stories when they leave the room.” Reflecting on the impact of this use of Thinking Maps on her development as a leader, she added, “This has been a powerful way for me to grow in a direction . . . from real comfort zone with students to more comfort zone with having adult conversations in the workplace.”

For Lynn, the use of Thinking Maps in these collaborative group settings represented an opportunity to provide the type of leadership she aspired to in her work. She noted, “The part I love the most is the use of the maps in working with groups with the emotional baggage.” Leading a team to be empowered, she explained, can help to move it beyond the dysfunction that emotions such as anxiety and fear can create. She said, “I love doing the problem solving all together and walking out with an outcome that everyone understands and is invested in.”

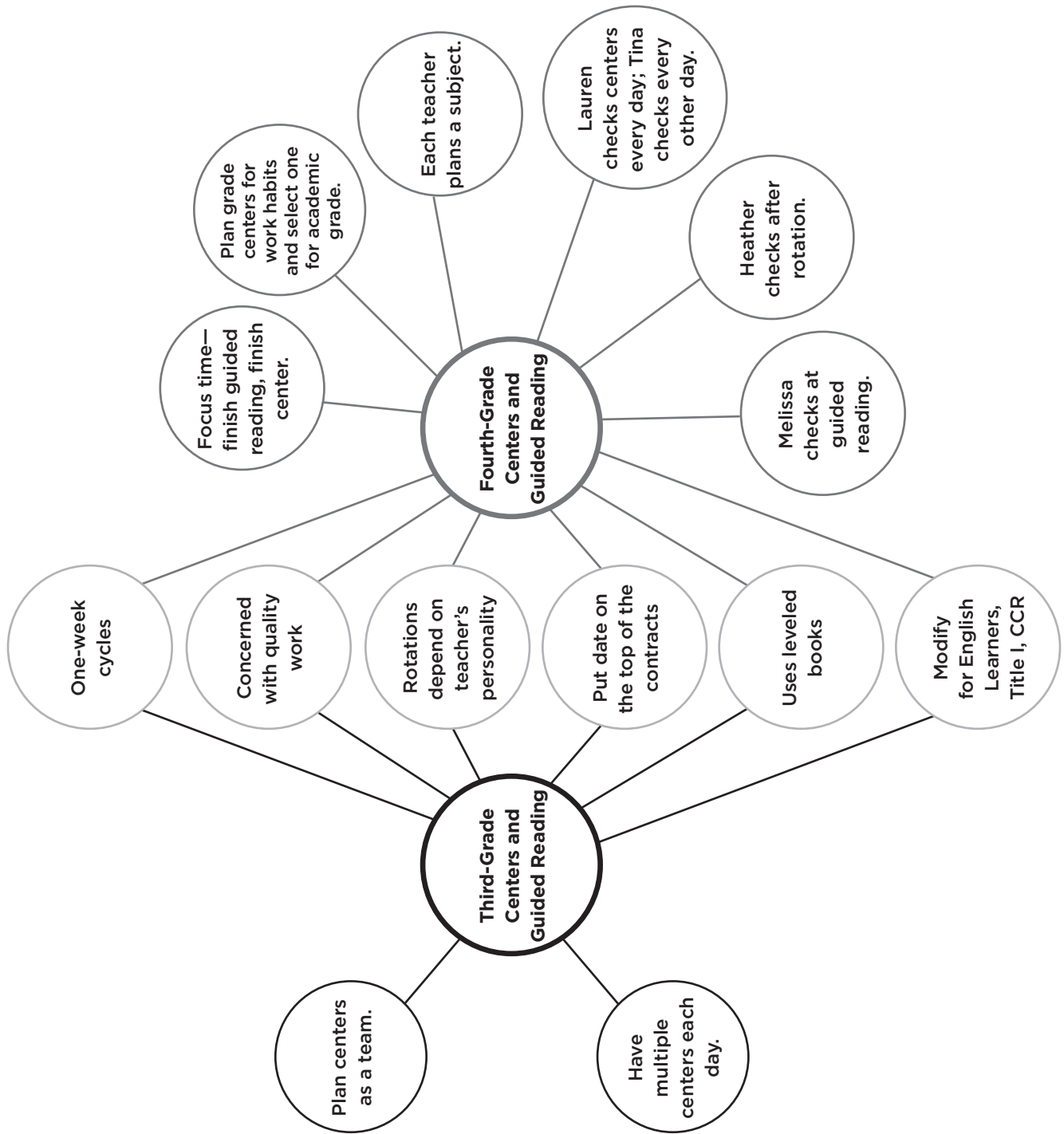


Figure 6.9: Sample Double Bubble Map to analyze guided-reading program per grade level.

Notice that *empowerment*, one of the five themes threading through these stories, is not derived by distributing roles and new responsibilities to people, or by making sure that everyone has his or her say. It develops instead through the openness of thinking within a dynamic, common language that supports individuals and groups to show their points of view within the context of deep patterns of thinking. Narrowly formulated, rational arguments from a single point of view are no longer adequate or reflective of the individual and collective potential of the people within the school community. Thus, the themes of *clarity* and *collaboration* heighten, engage, and emancipate the internal power of the mind from the small-minded conflicts that often arise in heated engagements between faculty members and within the much larger school community of parents and other interested parties.

Lynn described a meeting that occurred on the last day of school and that became quite heated. In this meeting, she experienced how the use of Thinking Maps could not only rescue a meeting from devolving into a battle of wills and accusations but transform it into an experience in which everyone involved, including herself, felt empowered and effective.

I had a team I brought in and said we have to think about how we're delivering gifted math services. We sat down, it was the last day of school—I let people dump all of their emotional issues. Some had axes to grind. After the first emotional dump—that “wait, we need to change the way we do business, you said they are being pulled out of your class too much, and you said we're not seeing the growth in scores, and you *said*”—I immediately jumped up and did a Multi-Flow Map. In the heated conversation, I was pulling in what everyone was saying and bringing it to the map, including all their ideas. In the moment, I grabbed a marker. It was the first time I understood objectifying emotions and being a third party in the room.

The marker and the ensuing map Lynn created to represent the range of emotions from the participants was, in fact, a skillful use of the strategy of *externalization*. So often we will say to each other, “I see what you mean,” but this is often a metaphorical placeholder for truly seeing and genuinely appreciating the wealth and expansiveness of another person's patterns of thinking. We often see our own version of another person's point of view from within our own frame of reference. With Thinking Maps, participants in the struggle to both *know what they mean* and *show what they know* have a visual language for representing their *internal*, complex, and nonlinear patterns of thinking *externally*. The focus shifts from the people involved to the ideas they discuss. As Lynn observed, her use of the maps sent an important signal to the individuals involved and the group as a whole: “I'm recognizing your concerns and including them as a cause in a box—what I hear you say is this.” She concluded, “Putting it [their ideas] in a box, they all felt heard.”

Next, Lynn shifted the discussion from the upset that people expressed to the goals they wanted for the gifted math services. Again, she turned to a Multi-Flow Map, which the group could use to identify the outcomes they hoped the implementation of the gifted math services would achieve. She noted, “So we went to the right side of the Multi-Flow Map and listed what we wanted to achieve—improved math thinking, increased scores, et cetera. Then, we went to a Tree Map to identify funding sources.” As Lynn explained, members of the faculty got lost in the emotional content of the discussion, losing sight of what they had intended to accomplish and the purpose of the changes they had instituted. The maps, she observed, took “the emotion out of it so we could go back and see what we said we wanted and needed, why are we changing and what we problem solved. This put the data on the board.” Making the data evident enabled them to see that the pull-out program affected the students’ achievement. Lynn noted:

It got it out of the personal. This is what I like most about using the maps in leadership. Once you start solving emotional problems in the moment, it is amazing what it does. It is the only tool I know that works so simply like that. Democracy is not time efficient—yet this is a tool that makes it possible.

Lynn shared that on a survey of working conditions conducted by the North Carolina Department of Public Instruction, teachers at Yates Mill reported feeling more empowered. She noted, “Thinking Maps give us a structure so that we are problem solving together. With the maps, the learner owns the learning, and as a leader I’m empowering people to make decisions and to *see* how it all makes sense.” Thinking Maps enable the faculty to document the *why* or the journey of an entire meeting discussion and then use those visual representations to analyze what should be done. Lynn commented how, before using Thinking Maps at meetings in this way, someone would have just taken notes. “It would have just been auditory,” she observed. “But now, we all walk away with an understanding.”

The Well of Emotions

The insights from Lynn and her staff and from the Vertical Team at Blackham School came through *clarity* and *efficiency* and *collaboration* of the most difficult and often conflicted kind, leading thinkers across a school not only to feel *empowered*, but also to know better the power of their own minds. This also means that they can stay in heated discussions and staff meetings that might otherwise go awry, and *sustain* a conversation about hard data without driving down into what often feels like a bottomless well of emotions or a competition of ideas. Gradually, confidence (and trust) in self, the group, and the organization as a whole develops and helps to create a culture of sustainability over the years.

In the course of human interactions, issues easily become quite complex and murky as emotions inform and influence them. Often people feel challenged to remain dispassionate in these interactions, believing that they must set aside their emotions in order to see and

think clearly. Attempts to suppress emotions can, however, have the opposite effect on achieving clarity as emotions can be powerful and useful forces in guiding and informing thinking. However, unconsciously allowing emotions to direct thinking and actions can also lead to what some refer to as an *emotional hijack* in which emotional filters not only inform but control our actions. Daniel Goleman et al. (2002) write, “The prefrontal area [of the brain] can veto an emotional impulse. . . . Without that veto, the result would be an emotional hijack, where the amygdala’s impulse is acted upon” (p. 29). Such impulsive actions are often taken defensively and aggressively (fight-or-flight) and can cause irreparable harm in already delicate relationships. Power and authority often expressed in hierarchically defined and exercised roles also contribute to situations in which emotions can easily create misunderstandings and misguided and unproductive actions.

Many of our respondents viewed Thinking Maps as the visual and practical extension of the brain’s executive functioning. From the routine task of designing and executing a simple plan to the more demanding challenge of responding to the endless stream of information and the intricacies of human dynamics in the workplace, each person worked overtime to lead in a positive, constructive, and sometimes visionary direction. Thinking Maps, as we have seen and heard, were indispensable in building, supporting, and enhancing the capacity of the brain to activate memory and language, direct attention to achieve both short- and long-term goals, and resolve issues of moral and ethical complexity, with emotions as a guide not as the determinant. This highly attuned orchestration of thought and feeling results in what Goleman et al. (2002) call *resonant leadership*, or the ability to skillfully, respectfully, and effectively organize and inspire the feelings and thoughts of others as well as oneself toward shared goals.

The use of Thinking Maps helps to remove artificial boundaries or separateness that narrow interpretations of role relationships can impose. The maps create a visual landscape that allows individuals to express and contextualize the holism of ideas through multiple thinking processes and frames of reference. The nature of this representation system—its grounding in inherent cognitive skills and intimate alignment with how the brain interacts with ideas and phenomena—sets it apart from other visual models or graphic organizers and allows it to function as a common visual language across roles as well as ages. The opportunity to fully represent the holism of their ideas clearly empowered many of those we interviewed. Former Superintendent Veronica McDermott observes, “Since the maps are rooted in the psychology of cognition, they, too, push users to be creative and to propel their thinking beyond the obvious.”

The maps foster deeper attention to one’s own thinking and to the ideas of others in a way that fundamentally changes the nature of the interaction. As one leader commented, “The maps are inevitably collaborative.” They enable people to participate in the collective construction of meaning. In doing so, they support a type of listening that literally and figuratively *draws* users into the dialogue and enables them to attend deeply to what is expressed. This type of listening, what Art Costa (2008a) refers to in part as *generative listening*, occurs when

“you can slow your mind’s hearing to your ears’ natural speed and hear beneath the words to their meaning”(p. 33). Just as Milton Glaser (2008) describes the act of drawing something as the opportunity to truly know it, literally drawing out ideas *draws* us to them, enabling us to take the time to listen and see deeply for the essence that exists beneath the surface.

For many interviewees, the use of Thinking Maps altered that internal dialogue and reframed their interactions with others in such a way as to allow for greater clarity and reciprocity. As Lambert (2009) asserts, “The brain’s capacity to find patterns and make sense of the world is liberated within such relationships that encourage mutual care and equitable engagement” (p. 11). So often, people describe the experience of using Thinking Maps in group settings as literally finding themselves on the same page with others involved. This is not to say that agreement is automatically achieved. Rather, a space is opened in which all involved enter as equal partners in the generation of ideas as they work toward shared meanings and sound decisions. The purposeful, focused interaction that the use of Thinking Maps facilitates can be quite disarming in a positive sense. Thinking Maps suspend the impulse to compartmentalize things or arrive prematurely at clarity. Instead, drawing out their own and others’ thinking allows people to become part of what Joseph Jaworski describes as *the unfolding* in which we accept others as “legitimate human beings” (Jaworski & Flowers, 1998, p. 11) and appreciate the ever-changing nature of our world and our constantly evolving understanding of it. In this way, we genuinely engage in the process of meaning making, an act of individual and collective construction that rejects “the illusion of fixity” and embraces the challenge and pleasure of living in “a world of continual possibility.”

Universal Themes of Connective Leadership

Because these themes of clarity, efficiency, collaboration, empowerment, and sustainability were so readily and uniformly identified and articulated, it might be concluded that they represent universal themes of central importance to people in leadership positions in school settings. However, it seems necessary to pause for a moment and ask whether these themes are vestiges of an antiquated model and reflect the habits of those who developed along with that system or, even so, whether they remain relevant in the current environment in which we live.

As Dickmann and Stanford-Blair (2002) propose in their book *Connecting Leadership to the Brain*, leadership, like all human behavior, evolves within an environmental context. Adapting to changes in the environment is necessary for all humans to survive and thrive, and the same holds true for those in leadership positions. They write, “The practice of leadership is not exempt from such contextual influence. Thus, the exercise of leadership in human culture responds to different contexts by making adjustments in the leadership behaviors engaged to influence others in goal achievement” (p. 126). While the endpoint remains the same—goal achievement—what adjustments in leadership behaviors are necessitated by the changes in the environmental conditions and human needs?

When asked what she looked for in the people she hired, Ursula Burns, the CEO of Xerox, answered, “I want them to be confident and uncertain” (as cited in Bryant, 2010). In a speech he delivered at a conference on international education, Michael Eskew, the CEO of UPS offered a similar statement regarding the qualities he valued in his workforce: “Learning how to learn is a trait we will always value” (Eskew, 2005, p. 5). What, then, do these two leaders of major corporations recognize about the current realities of the business environment that caused them to respond so similarly and, to some people, so unexpectedly? Both appear to recognize that a major condition of the current environment is change—and rapid change at that—and that agility as a learner will enable one to thrive and continue to contribute to the organization regardless of the changes that occur.

What implications, then, does this new environment have for leadership practices in which there can be no *illusion of fixity*, not out of despair but with great optimism? Dickmann and Stanford-Blair (2002) suggest, “It is the leader who acts mindfully, nurturing her or his own intelligence and the intelligence of others, who sets the tone for an organization poised to be successful in the new century” (p. 133).

So it would seem that clarity, efficiency, collaboration, empowerment, and sustainability remain relevant as important aspirations for leaders in their practice insofar as these are not only connected to their own individual purposes but enhance the capacity of others within the organization to achieve these levels in their work as well.



In the next chapter, we will hear the story of an entire school system that believed the fulfillment of its obligation to prepare its students for success in the 21st century depended on its becoming a thinking system. However, as Dickmann and Stanford-Blair (2002) point out, “Meaningful change or progress occurs only when what is envisioned is translated into specific action” (p. 55). That’s where Thinking Maps come in.