Schools That Learn
Annex

a supplement to:

Schools That Learn: A Fifth Discipline Fieldbook for Educators, Parents, and Everyone Who Cares About Education
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Introduction

Why a *Schools That Learn Annex*?

Like the previous two Fieldbooks, *The Fifth Discipline Fieldbook*, and *The Dance of Change*, *Schools That Learn* also had more material than would fit in the 600-page limit. As a result, the authors of those books created “Lost Chapters” booklets comprised of material that had to be cut from the final manuscripts.

Running out of room is a common experience for educators. Many schools districts outgrow their buildings and must either build new schools or build supplementary space to meet the needs of their staff and students. Consider this our annex, because just as schools run out of classroom space, not ideas or enthusiasm, we ran out of pages, not ideas or material.

The power of the work described in the Fifth Discipline Resource books lies in people’s stories. The “Lost Chapter” booklets were mostly those stories, or longer versions that appeared in the books. This Annex also includes expanded material that was condensed, or cut entirely, due to space. Since so much of the Fifth Discipline work is used in classrooms, learning communities, and professional development experiences we decided to offer something a little different.

We have all experienced the frustration of trying to photocopy a page out of a 600-page book without breaking the binding or having a copy with words that curve in bent perspective to vanish in some gray vertical boundary. To help alleviate some frustration, the material here is designed to be photocopied, handed out, and/or used as overhead transparencies.

We hope that this *Schools That Learn Annex* makes it easier to create your own stories, because in the end, that is what practicing the Five Disciplines is all about.

— Janis Dutton, Senior Editor
The Fifth Discipline Fieldbook Project
Definitions
Learning Organization: a group of people who are continually enhancing their capacity to create their desired future. At the heart of a learning organization is a shift of mind—from seeing ourselves as separate from the world to connected to the world, from seeing problems as being caused by some external forces to seeing how our own actions create the problems we experience.

A learning organization is a place where people are continually exploring how they create their reality. And how they can change it.
Learning Discipline: a developmental path for acquiring certain skills or competencies about how we think, what we truly want, and how we interact and learn with one another. To practice a discipline is to be a lifelong learner. “The more you learn the more acutely aware you become of your ignorance.”
— Peter Senge, The Fifth Discipline

The five learning disciplines represent bodies of “actionable knowledge” comprised of underlying theories, and practical tools and methods derived from these theories.

The five learning disciplines provide a process and a language to help people develop their capacity to:

- Hold and seek a vision;
- Reflect and inquire;
- Build collective capabilities;
- Understand systems.

The people who contribute the most to an enterprise are the people who are committed to the practice of these disciplines for themselves by expanding their own individual and collective abilities to create the changes they really care about.
**Systems Thinking:** a way of thinking about, and a language for describing and understanding the forces and interrelationships that shape the behavior of systems. The practice of this discipline develops awareness of complexity, interdependencies, change and leverage.

**Personal Mastery:** the discipline of continually clarifying and deepening our personal vision, of focusing our energies, and of seeing reality objectively. Continual practice teaches us not to lower our vision even if it seems impossible. Personal mastery teaches us to choose—picking the results and actions that we will make into our destiny.

**Mental Models:** deeply ingrained assumptions, attitudes and beliefs that influence how we understand the world and how we take action. The discipline of mental models is learning to unearth our internal pictures of the world, to bring them to the surface and hold them rigorously to scrutiny to see how they shape our actions and decisions.

**Shared Vision:** developing shared images of the vision we seek to create, and the principles and guiding practices by which we hope to get there. The practice of this discipline fosters genuine commitment and enrollment rather than compliance.

**Team Learning:** the discipline of developing the capacity of a team to create the results its members truly desires. The practice of this discipline transforms conversational and collective thinking skills, so groups of people can reliably develop intelligence and ability greater than the sum of individual members’ talents.
Maps
**The Reader’s Journey**

Any six hundred page book can seem a bit weighty in both size and content, but traveling through most books is a predetermined journey from page one until the end. In The Fifth Discipline Fieldbook series the reader’s journey is neither predetermined nor constant. Each reader, each reading, follows a different path.

*Schools that Learn* is organized around the nested systems that support schooling: Classroom, School, and Community. The five learning disciplines—personal mastery, mental models, team learning, shared vision, systems thinking—provided the warp around which we wove the stories, guiding ideas and activities in the book. The five learning disciplines are themselves a system, complex and interdependent. They operate most effectively as an ensemble. Yet, it can be useful to focus at times on one of the disciplines explicitly.

So how do you get started, especially in a book written for such a broad audience as that for *Schools That Learn*? How do you focus explicitly on one of the disciplines? We found ourselves answering those questions for relatives, friends and colleagues by suggesting a number of pieces throughout the book based on where they reside in the nested systems. We used Inspiration* software, one of our favorite thought organizers, to turn these lists into maps.

Remember that the most powerful learning begins from where the learner is:

Start with what you know.
Start where you already are.
But don’t stay in one place. A true journey is an exploration.

* http://www.inspiration.com
Tools
The Ladder of Inference

See *Schools That Learn* (pp. 68-71) and *The Fifth Discipline Fieldbook* (pp. 242-146) for overviews of the Ladder of Inference, and *Schools That Learn* (pp. 113, 118, and 350) for examples.

**Purpose:** The Ladder of Inference can be used in professional development, in the classroom, and in a variety of school and community meetings. When teaching (or any heated discussions) instead of letting arguments escalate, you can ask “What did you actually hear or see that led you to this conclusion? Many people find it useful to enlarge the diagram and post it on the classroom or meeting room walls.

We live in a world of self-generating beliefs, which remain largely uncontested. We adopt those beliefs because they are based on conclusions, which are inferred from what we observe, plus our past experience. The ladder of inference explains why most people don’t usually remember where their deepest attitudes came from. The data is long since lost to memory, after years of inferential leaps. Our ability to achieve the results we really desire is eroded by our assumptions that:

- Our beliefs are the truth.
- The truth is obvious.
- Our beliefs are based on real data.
- The data we select are the real data.

You can’t live your life without adding meaning or drawing conclusions. It would be an inefficient and tedious way to live. But you can surface mental models and improve communications through reflection and balancing inquiry and advocacy by using the ladder of inference in three ways:

- Becoming more aware of your own thinking and reasoning (reflection);
- Making your thinking and reasoning more visible to others (advocacy);
- Inquiring into others’ thinking and reasoning (inquiry).

When people understand the concepts behind the ladder of inference, you can stop a conversation in its tracks and ask several questions:

- **What are the observable data behind that statement?**
- **Does everyone agree on what the data are?**
- **Can you run me through your reasoning?**
- **How did we get from that data to these abstract assumptions?**
- **When you said “[your inference],” did you mean “[my interpretation of it]”?

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I take: actions
(based on my beliefs)

I adopt: beliefs
(about the world)

I draw: conclusions

I make: assumptions
(based on the

I add: meanings
(cultural and personal)

I select: “data”
(from what I observe)

Observable “data” and experiences (as a videotape recorder might capture it)

The reflexive loop
(Our beliefs affect what data we select next time.)
Balancing Inquiry and Advocacy

See *Schools That Learn* (pp. 218-222) and *The Fifth Discipline Fieldbook* (pp. 253-263).

**Purpose:** Balancing inquiry and advocacy helps teams consider multiple perspectives by encouraging people to lay out their own reasoning and encouraging others to challenge it. It is also a useful tool for individuals to begin to change organizations from within. The Inquiry/Advocacy pallet enlarged and posted in a classroom can also be used to engage students in thinking about their own skills in moving classroom discussion forward or blocking it.

Balancing inquiry with advocacy, like many other learning skills, may seem easy until you try it. It is sometimes hard on people’s cherished opinions, but a little bit of practice can yield great results. The payoff comes in the more creative and insightful realizations that occur when people combine multiple perspectives around a difficult issue.

Inquiry (asking about the reasoning and assumptions behind other people’s statements) is more powerful when combined with an advocacy that explains the reasoning and assumptions behind your own statements. You can think of it as walking slowly up the ladder of inference:

- Here is my view and here is how I arrived at it.
- How does it sound to you?
- What makes sense to you and what doesn’t?
- Do you see any ways I can improve it?

Balancing inquiry and advocacy means developing a variety of ways of advocating and inquiring, and integrating them together as an artist does with colors on a palette. As the creator of your part of the conversation you should be able to incorporate styles from all four quadrants of the palette.
Learning Journals
See *Schools That Learn* (pp. 228-230 and pp. 353-354).

Journals are powerful tools to help individuals and teams reflect critically on their learning and decision-making processes. They can capture and document an individual’s or group’s growth and serve as a chronicle of learning. They help people focus on what they are learning about themselves and others, and help them become co-designers of their learning environment.

The following charts and questions can be used to reflect verbally as a group or through individual writing.

- What did you find particularly interesting?
- What would you like to know more about?
- What confused you?
- What confusion did you resolve? Can you explain it to others?
- Have you been open to other people’s ideas?
- Did you move toward our common goals?
- Did you understand each other’s attitudes, why other people held them, and how that might affect the next step?
- How did your behavior help or hinder the group?
- What shifts in thinking and interacting have you observed?
- What behaviors led to those shifts?
<table>
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<th>Shifts I have made in thinking and interacting:</th>
<th>Behaviors that might have assisted in creating those shifts:</th>
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For more information see the contributor page at [http://www.fieldbook.com](http://www.fieldbook.com)

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Shifts I have made in thinking and interacting:

Behaviors that might have assisted in creating those shifts:
Purpose: Often when people are in positions of power over others, their words and actions can have a long-term impact on the dignity of the people around them. Use the chart on the following page as a tool to think about the ways people may be using language in a way that communicates unintended meaning.

Most of us can probably remember school experiences that are so painful the emotions have become much more prominent in our memories than the content we were supposed to learn. In fact, most of us can probably point to those same kinds of experiences at work or even at home. Eventually these experiences take a toll on us.

Busy people—teachers, parents, principles, bosses—are often unaware of how the language they use affects both the way they think and how others interpret their messages. How often do we invalidate others with our words? Anyone in a position of power or leadership might do well by drawing on the cardinal rule of medical practice: First, do no harm.

You can avoid this by talking to the situation, not the personality or the person. For example, in some schools teachers no longer talk about “At-Risk Students,” but instead “Students in an At-Risk Situation.” Calling them At-Risk students reflected a thinking that somehow the students were at fault, either as character or personality flaws. By changing the way they labeled the students they found that they moved away from blaming the student and started seeking more systemic solutions to the students situations.

The chart on the following page can be used as a solo or team exercise to increase awareness of the real signals you or others in authority may be sending through words. Draw on the understanding in the Ladder of Inference and Balancing Advocacy and Inquiry. Does the leader’s language support a child’s (or adult’s) learning or interfere with it? What kind of signals are you sending with your language? Reframe observations so that learners or colleagues become partners in deciding what to do next instead of objects of blame.
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<th>When you say . . .</th>
<th>They might hear it as . . .</th>
<th>You can turn it into a learning opportunity by saying . . .</th>
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Exercises
**Team Exercise: Digging up mental models—the fossils of our own thinking**

See *Schools That Learn* (page 65).

Purpose: Bringing mental models to the surface is a little bit like excavating an archaeological site; you have to tread lightly at first. This exercise helps both children and adults realize that even with the same, seemingly simple, set of data people offer widely varying interpretations. It can be used as both an oral or written exercise. You can then use the humor generated in the conversation to talk about why we need to talk about our differences and misunderstandings with minimal defensiveness. Otherwise we are seriously limiting our ability to change.

**Step One:** Copy the diagram on page 24 for use as an overhead transparency. Before projecting the diagram, cover it so none of it shows. Then tell the following story.

A community was building a new school. One day, while the bulldozer was re-grading the site, the workers exposed a level of sandstone with some dinosaur footprints imbedded in it. They called the school superintendent, who called the school board, who called the mayor, who told her husband and children about it that evening. The children called their friends. The next morning a large crowd of people gathered at the site.

**Step Two:** Uncover the top one third of the diagram showing two parallel sets of prints and ask people to meet in small groups to consider what the bulldozer had uncovered. What did the community members see? What happened? Reconvene to the larger group. Did the smaller groups reach the same conclusions or describe the same event? Often groups will discuss it in different detail, with some noticing that one set of footprints suggests that the dinosaur is running. Others are more specific as to species and size. Continue the story.

While the people in the community argued over their different interpretations the bulldozers continued to move soil, and uncovered more of the sandstone layer. Community members wearing hard hats had been observing the site. Soon an even larger crowd gathered to consider the latest discovery.
Step Three: Uncover the middle third of the diagram showing the prints mixed together. What happened here? Often at this point groups jump into the discussion before they have the opportunity to talk in smaller groups. Explanations range from fighting to courtship. Continue the story.

The next day the bulldozer uncovered the rest of the sandstone. At first the community members reacted with stunned silence, but not for long. Soon they engaged in an active debate of competing explanations.

Step Four: Uncover the bottom third of the diagram with one set of prints remaining. Now what happened? Finalize your story. In other words take a stand. Did one fly off? Was one eaten?

Step Five: Imagine two sets of footprints in the snow. Were the people or animals there at the same time? Did they see and interact with each other or were the two sets of prints made at different times? How many of your stories placed the dinosaurs at the site at the same time. How many said they were there at separate times? What else might have happened to leave those sets of prints in the stone? Can you now tell a different version of the story that is as accurate as your first?

In any new experience, most people are drawn to take in and remember only the information that reinforces their existing mental models and ignore the data that challenges them. The discipline of Mental Models helps explain why two people can observe the same event or data, and then describe it or interpret it differently: They are paying attention to different details. They are operating from different experiences and assumptions.

Practicing the discipline of Mental Models individually and in teams is crucial for people who want to understand their world, or their school, more completely—because, like a pane of glass framing and subtly distorting our vision, our mental models determine what we see.
Dinosaur Footprints
**Purpose:** In education we often focus on events and what just happened—this morning, yesterday, or last week—and spend most of our time reacting to those events. Try thinking of these seemingly unrelated events as just the tip of an iceberg. While what you can actually see may seem massive and threatening, the real threats lie where the water is darkest and we have the least direction. What are the systemic structures and mental models that hold aloft the visible tip of the iceberg? The Iceberg (especially when combined with the Ladder of Inference) is a powerful tool to increase communication and help teams move from a reactive mode to a transformative mode.

**Step One: Events (react)**

Name a critical event (such as a crisis) that emerged in the last few months in your school or classroom.

**Step Two: Patterns and Trends (anticipate)**

What is the history of the event you described in step one? When has it occurred before? Chart the course of related events over time on a graph. What patterns do you see emerging?

**Step Three: Systemic Structure (design)**

What forces seem to create the pattern of behavior you describe in step 2? How do these systemic elements seem to influence each other? What fundamental aspects of the school must be changed, if you want to change the patterns?

**Step 4: Mental Models (transform)**

What is it about my thinking and everyone’s thinking that causes this structure to persist?

Now consider the problem that you have been charting. Behind each element of the systemic structure is a set of attitudes and beliefs, some of which have been unchallenged, even though they are misleading or counterproductive, because they are unseen. Can you safely bring them to the surface and inquire about them?
The Iceberg

- Events: What just happened?
- Patterns/Trends: What's been happening? Have we been here or some place similar before?
- Systemic Structures: What are the forces at play contributing to these patterns?
- Mental Models: What about our thinking allows this situation to persist?

Ways of Explaining Reality

React

Anticipate

Design

Transform
Solo and Team Exercise: A Vision for Schools

See also *Schools That Learn* (pp. 93-98) and *The Fifth Discipline Fieldbook* (p. 208).

**Purpose:** *This exercise helps to prepare individual groundwork for creating a shared vision; links people’s personal visions to the school’s potential; helps people align the school’s purpose with their own.*

Every organization has a purpose for existence, which its members share, even if they are unaware that they do. The purpose can be tacit or espoused, and is often obscured by conventional day-to-day practices and the organization’s culture and structure. The espoused purpose is not always the one in practice. All shared visions begin with personal visions, which are then seen in relation to others in the organization. To build a genuinely shared vision many people must reflect first on what the organization’s purpose is, and what it could be before deciding on action.

- **What is your vision for schools?**
- **What would you like to see your school become for its own sake?**
  - What reputation would it have?
  - What contribution would it make?
  - What values would it embody?
  - What mission would it have?
  - What would the physical environment look like?
  - How would people work together?
  - How would people handle good and bad times?

- **If you had this kind of school what would it bring you?**
  - What would it bring other people?
  - How would it allow your own personal vision to flourish?
  - How would it allow other’s personal visions to flourish?
**Solo and Team Exercise: A Vision for Community**

See also *Schools That Learn* (pp.93-98) and *The Fifth Discipline Fieldbook* (p. 208).

**Purpose:** *This exercise helps to prepare individual groundwork for creating a shared vision; links people’s personal visions to the community’s potential; helps people align the community’s purpose with their own.*

Communities, like every organization, have a purpose for existence, which its members share, even if they are unaware that they do. The purpose can be tacit or espoused, and is often obscured by conventional day-to-day practices, and the community’s culture and structure. The espoused purpose may not be the one that is actually at work. To build a genuinely shared vision many people must reflect first on what the community’s purpose is, and what it could be before deciding on action. All shared visions begin with personal visions, which are then seen in relation to others.

- **What is your vision for your community?**
- **What would you like to see your community become?**
  - What reputation would it have?
  - What contribution would it make?
  - What values would it embody?
  - What mission would it have?
  - What would the physical environment look like?
  - How would people work together?
  - How would people handle good and bad times?

- **If you had this kind of community what would it bring you?**
  - What would it bring other people?
  - How would it allow your own personal vision to flourish?
  - How would it allow other’s personal visions to flourish?
Variation: Current Reality Check

Is your school or community’s espoused purpose the one that is really operating? Do you have a clear understanding of your current reality? To become aware of an organization’s purpose, people in organizations can learn to ask questions and listen for answers. Reframing the vision questions from the two previous exercises in the present tense can be a useful current reality check. For example:

- What reputation does our school (community) have?
- What contribution does it make?
  To what end? For whom? By whom?
  In favor of whom? In favor of what?
- What values does it embody?
- What does the physical environment look like?
- How do people work together?
- How do people handle good and bad times?
- How does the school (community) allow your own personal vision to flourish?
- How does it allow other’s personal visions to flourish?
- What is it about my thinking and behavior that allows this situation (good or bad) to persist?
Choosing

See *Schools That Learn* (pp. 65 and 173) and *The Fifth Discipline Fieldbook* (p. 218).

Making a choice is much more powerful than saying, “I want . . .” even when the vision itself is exactly the same. In any life-changing choice—a marriage, the choice to bring a child into the world, a new job, or the choice of a personal vision—there is a custodial sense invoked. You become a partner in the process of making it come to life. You are more willing to take risks, and more clear in judging those risks. And you are more determined to get closer to your vision.

You do not need a formal “choosing” exercise. Make the choices in whatever manner with whatever rituals suit you best. You can make such choices when facing a group, facing another person, or merely facing a mirror. It may be as simple as returning to the notes where you have written elements of your vision, and actively choosing those that you are ready to choose. You may want to sit with a trusted colleague or friend and state your choices to them. Or you may prefer solitude. Having made that choice, the vision will become part of you—wherever it may lead.

Simply say the words, formally, to yourself:

“I choose . . .”

(complete the sentence with the aspect of the vision you are focusing on).