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What We Know About Learning

Imagine a situation in which something very dear to you (e.g., your job, your family, your health) depends on your ability to correctly identify what is pictured in Figure 1.1.

Needless to say, in this hypothetical situation, you're highly motivated to figure out what is being shown in the picture. However, the picture is only obvious to approximately 10% of people; the other 90% can figure it out with some instruction. What sort of instruction would be most likely to result in your figuring out the picture?

Here's what a group of teachers said when they were asked this question after seeing this picture:

"I learn best by having it explained to me."

"Tell me how the picture is constructed so I can figure it out on my own."

"Tell me what it's supposed to be."

"Show me another one like it."

"Talking to other people about it helps me learn."

"Give me some paper so I can draw around the black areas."

"I need to read more information about how the picture works."

"Give me some options to choose from."

"I want to be under my headphones, listening to music, and not listening to anybody else."

"Let me make some guesses, and you tell me if I'm close."

What would you say? Something similar to what these other teachers said, or something entirely different? The point is that although we share some processes in common, each person approaches a learning task in a unique way. The key component, however, is that in figuring out the picture, each of us is engaged in **learning**.

Take a moment to look at Figure 1.1 again. Now, select from the approaches below to figure out what the picture is.

- Take different visual perspectives (i.e., hold it different distances

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Figure 1.1



from your eyes or look at it out of the corner of your eye) to see whether you can figure it out.

- Read what other people think it is (turn to Note 1 in the Chapter 1 Notes).
- See another picture like it (turn to Note 2 in the Chapter 1 Notes).
- Read information about how the picture was constructed (turn to Note 3 in the Chapter 1 Notes).
- Try drawing “wholes” around pieces of the picture (turn to Note 4 in the Chapter 1 Notes for another copy of the picture you can draw on).
- Listen to some music while you look at the picture (you’re on your own here).
- Read a set of words describing the picture (turn to Note 5 in the Chapter 1 Notes and follow the instructions for covering the list so you can read the words one by one).

Once you’ve figured out the picture, reflect for a moment on the learning strategies you used. We’ll return to this puzzle picture later, and don’t worry if you don’t see the picture; some people never see it (there’s a picture in Note 6 to show you what the “answer” is). And, if you’re curious about the second picture, Note 7 shows the “answer.”

How Do You Learn Best?

How do you learn best? Take a minute or two to think about how you approached the puzzle picture. What was the first strategy you used to figure it out? Did that strategy work? If not, what did you try next? Did that work? If not, how did you feel? Did you want to give up? Were you angry? Did you skip ahead? Did you turn to Note 6 to see what the “answer” was? Were you reassured by our telling you not to worry if

you didn't see the picture? Did you reserve judgment, thinking we might be playing a trick on you? Or are you one of the 10% of people who see the "answer" right away? The answers to these questions offer some insight into how you like to approach learning something new and what you do when the process is not necessarily immediate or easy (unless you're in that 10% group).

Another way to gain insight into how you learn best is to consider your responses to these questions:

- What do you typically do to reduce stress? Do you like to be alone? Listen to or create music? Read? Walk/sit in a natural setting? Organize your closets/drawers/workshop/files/calendar? Talk to friends? Look at art? Draw, paint, sculpt, make a piece of furniture? Dance? Watch a sports event? Volunteer in a community organization or agency? Get a massage? Play video games? Surf the Internet?
- How do you play? Do you like to play by yourself? With animals? With other people? What form does your play take? Is it organized and scripted (e.g., an athletic activity of some sort)? Or is it more spontaneous (e.g., skipping stones on water, tossing a Frisbee with a friend, going to a movie)? Is your play physical? Musical? Does it involve language (e.g., Do you like to play with words)? Do you like to play with colors, forms, textures? Do you like to play with different ways to organize things (e.g., time, events, objects, ideas)? Do you like to play with numbers or numerical concepts? Do you enjoy using new technologies and Web-based tools?
- What sorts of things in your life do you like to think about and plan? For instance, do you enjoy planning social gatherings? If so, which aspects are most enjoyable? Thinking about who will be there and the dynamics among people? Planning the decorations and food? Thinking about the clothing everyone will wear? Which sorts of things do you dread doing? Balancing your checkbook? Talking to a family member about something difficult? Exercising? Being alone? Being in social situations? Playing party games?
- Do you prefer working on projects with other people, or do you prefer working by yourself? If you work with others, is it easy for you to explain your ideas and thoughts? Which role(s) do you typically take: leader, organizer, idea generator, explainer, recorder, detail person, emotional support person? If you prefer working alone, how do you approach a new project? What do you usually do first? Which part of working alone do you most enjoy?
- Do you always approach problems or new learning in the same way, or do you like to try new approaches to see how they work? Over your lifetime, have you changed the way you like to learn and experience new things? Are your learning strengths different from what they were when you were a teenager? A young(er) adult?
- Do you like to know why you should bother to learn new skills, knowledge, or processes? That is,

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before you commit to learning something new, do you analyze its relevance, value, cost, and short-term and long-term contributions to your life?

When thinking about your responses to these questions, consider how you feel when you find yourself in learning situations in which your learning preferences are recognized, valued, supported, and extended. Alternately, think about how you feel when your learning preferences are overlooked, dismissed, or worse, denigrated. If you're like most people, you feel energized and creative when you're in learning environments that support how you learn best, and you feel angry, depressed, or even hopeless when you find yourself in learning contexts that do not support how you learn best.

Most of us go into teaching because we believe we can make a positive difference in young people's lives. For many of us, we share a belief in students' curiosity and desire to learn, we want to support them as lifelong learners, and we desire to help students develop into competent and responsible adults. We undertake the job of educating students out of a commitment to the greater good of our society, knowing that supporting students in their development as learners leads to citizens who care about not just themselves and their own communities, but other people and societies as well.

Today, in many parts of the United States, schools are no longer organized to support students' inherent curiosity, desire to learn, and motivation to develop responsibility for their learning. Reflecting on how you tried to solve the puzzle picture and your

responses to the questions that followed, imagine how students feel when they have few—or no—opportunities to explore learning, discover how they learn best, try out different approaches to solving problems, work independently and with teammates on projects that interest them, determine the relevance of what they are learning to their lives, and analyze the benefits of their learning to their short- and long-term goals for themselves. Imagine how you would feel if you were in their shoes. Would you feel motivated to learn what someone else thinks is best for you? Would you feel motivated to learn from someone who tells you what you need to know, in spite of the fact that he or she knows little or nothing about you and your life, dreams, hopes, and goals?

What Does the Evidence Show About Supporting Natural Learning?

From our research as well as that of others who have explored differences in what learning looks like in and out of school settings, several things have become obvious (e.g., McCombs, 2001, 2004b; Zimmerman & Schunk, 2001). Real-life learning from the learner's perspective is often playful, recursive and nonlinear, engaging, self-directed, and meaningful. But why are the natural processes of motivation and learning seen in real life rarely seen in most school settings? The research shows that self-motivated learning is only possible in contexts that provide the learner with **choice** and **control**. When students have choice and are

allowed to control major aspects of their learning (such as what topics to pursue, how and when to study, and outcomes to achieve) they are more likely to self-regulate their thinking and learning processes than when they have little or no choice or control.

Recall how you approached “solving” the picture puzzle at the beginning of this chapter. Imagine how you would have approached solving it if we had said you needed to learn how to solve puzzles of this type because you’d need to know how to do it later in your life. Imagine, too, how you would have approached the problem if we had told you that you had no choice about learning how to do it.

The research indicates that schools need to offer person-centered models of learning that incorporate challenging learning experiences. School learning experiences should prepare learners to be knowledge producers, knowledge users, and socially responsible citizens. Given the research evidence, a natural question to ask is whether the socially valued academic knowledge and skills standards currently in vogue are sufficient for educating students for the twenty-first-century world, where content is so abundant that it makes a poor foundation for an educational system. The scarce commodities are context, meaning, and successful communication with others. The purposes of education that prepares learners for the world outside school are to teach learners how to communicate with others, find relevant and accurate information for the task at hand, and become co-learners with teachers and peers in diverse settings beyond school walls.

Moving toward this vision requires fresh concepts, validated by evidence

from careful research, that define the learning process and the evolving purposes of education. It also requires rethinking current directions and practices. While maintaining high standards in the learning of desired content and skills, the learner, learning process, and learning environment must not be neglected if we are to adequately prepare students for productive and healthy futures. Consequently, state and national standards must be critically reevaluated in terms of what is necessary to prepare students to be knowledgeable, responsible, and caring citizens. Standards must move beyond knowledge conservation to incorporate knowledge creation and production (Hannafin, 1999). The current focus on content must be balanced with a focus on individual learners and their holistic learning needs in an increasingly complex and fast-changing world.

Educators have long argued that content alone does not prepare students to be successful workers in the global economy or effective citizens in the global village (McLuhan, 1989; Tomlinson, 1999). What is needed are learner-centered models of schooling that promote autonomy, personal responsibility, and trust, as well as the broader base of knowledge that allows students to be more than low-level knowledge reproducers. Current models of school that focus on firm control of students and rote memorization promote compliance with directives, inability and unwillingness to question authority, and dependence and fragility as a lifelong learner. In contrast, learner-centered models contribute to the development of students who are the knowledge producers and critical thinkers who participate actively and

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productively both in their local societies and the global community. To become knowledge producers and critical thinkers, students must experience schooling practices in which they are active partners with caring adults in governance and learning activities. Through their experiences in school, they must experience and help create social justice; they must have opportunities to learn ethical decision making through partnering with the adults in their schools and communities.

The needs of learners—including teachers as learners—are changing and require our attention in order to address problems such as school dropout and teacher departures from the profession, both consequences of learner alienation. Ryan and Deci (2000) maintain that alienation in any age population is caused by failing to provide supports for competence, autonomy, and relatedness. Preparing teachers to meet these needs for themselves and their students is essential to healthy development and to creating contexts that engender individual commitment, effort, and high-quality performance. Unfortunately, there are numerous examples in the current educational reform agenda of coercive and punitive consequences for students, teachers, and administrators when students fail to achieve educational standards on state and national tests. The time has come for a research-based model that addresses these learner needs while also addressing high standards of performance for all learners.

A recent national study of low socioeconomic status (SES) and minority elementary students indicated that the most powerful school characteristics for promoting resiliency (academic

success) included a supportive school environment model that was safe and orderly and that promoted positive student-teacher relationships (Borman & Overman, 2004). Students in these environments displayed greater engagement in academic activities, a stronger sense of math efficacy, higher self-esteem, and a more positive outlook toward school. These models are particularly needed in today's culture, which has fewer and less stable family and social institutions that promote resilience. Schools can help meet these needs to the extent that they are focused on learner needs that go beyond academic competence (Phillips, 1997).

A review of alternative educational models examined learner-centered, progressive, and holistic education (Martin, 2002). Growing numbers of alternative schools fit within this broad category and include democratic and free schools, folk education, Quaker schools, home schooling/unschooling/deschooling, Krishnamurti schools, Montessori education, open schools, and Waldorf schools. This diversity of alternatives to mainstream or traditional education is in keeping with social values that include pluralism and diversity, a more sustainable world, and just democracy. The alternative models tend *not* to be rooted in an overly rational or objective way of knowing; in addition, they acknowledge interdependencies and values, and they incorporate the emotional, ecological, spiritual, physical, social, and intellectual aspects of living that are reflected in schooling (Forbes, 1999). These learner-based models address the needs of the whole child in balance with the needs of the community and society. They hold in common a respect for diversity and different

philosophical beliefs about what it means to live, learn, love, and grow in today's society. They are all "person-centered" approaches expressed in a diversity of ways. What makes "learner-centered" education transformative (holistic) is its recognition that meaning is co-constructed and that self-regulation occurs through interdependence, with a focus on being and becoming fully functioning.

Teachers and Students as Co-Learners: An Invitation

Learner-centered teachers not only know the subject matter they are teaching; they also understand that they—along with their students—are learners. The most effective teachers know how to flexibly shift their role from teacher to expert learner to beginning learner. As co-learners, they can share the ownership of learning with their students as appropriate. They model effective learning processes as they help students understand how to assume increased responsibility for their learning. And, learner-centered teachers know which knowledge and skills they want students to acquire and the best methods for facilitating the learning process for individual learners with diverse learning interests and needs.

Teaching practices that are "learner-centered" stem from the understanding that each student needs to feel known, respected, cared about, and supported. Students whose teachers use learner-centered practices are aware that their unique learning needs, interests, and talents are being considered and are valued and respected. They are partners with teachers in the learning process. As a result, they feel honored, supported,

and have a sense of ownership of their learning. In the process, students' natural motivation to learn emerges.

When an educational paradigm or reform agenda puts something other than the learner at the center of instructional decision making, all learners—teachers included—suffer. They know that the system is not about them and is not responsive to their needs. From learners' perspectives, the system is out of balance if knowledge (content standards) or learning (performance skills and achievement measures) is at the center of instructional decision making. In such a system, learners recognize they are not important because who they are and what they need are not at the heart of the learning process. At worst, they feel left out, ignored, or alienated; at best, they feel the system is impersonal and irrelevant. In either case, learning and motivation to learn suffer. Students and teachers alike begin to disengage from the learning process.

If kids feel connected, if they feel part of a community where they're respected and valued, they'll be more likely to stay in school . . . and succeed. (Social studies teacher we have worked with in a learner-centered high school)

In learner-centered systems, teachers model lifelong and continuous learning for their students. They also assume leadership roles and serve as key constituents in the educational system (students, teachers, other school staff, parents, community members) to support students in a lifelong learning process of continuous growth and improvement. Teachers in learner-centered systems fundamentally understand the

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relational nature of learning. That is, they understand that at its core, learning is relational in two ways: (1) individual learners attempt to make personal meaning from information and experiences and (2) strong student-teacher relationships provide a positive climate out of which natural learning and motivation emerge.

School cultures based on learners, that is, school cultures focused on personalized learning, use collaboration between teachers and students working together to develop meaningful learning activities (Keefe & Jenkins, 2002). In these schools, there is a collective responsibility for student learning and a focus on high morale as well as high academic achievement. Learning environments in these schools are “thoughtful” in the sense that they support conversation, learning by doing, apprenticeship experiences, and authentic student achievement. Instruction is organized to focus on a few important topics in integrated and coherent ways that provide continuity and time for inquiry, interactive dialogue, and quality of thought rather than the need for “right” answers. Teachers and students have input into the way time is used, with an emphasis on performance rather than time so that students have more opportunities to make choices in curriculum and instruction.

Schools organized around personalized instruction focus on renewal, or how learner growth in knowledge and self-awareness can lead to wisdom and collective responsibility, how to create creative and supportive educational environments, and how to engage learners in critical inquiry and reflection

about educational practice (Keefe & Jenkins, 2002). In these personalized learning environments, the school is organized to take individual learner characteristics and needs into account and to use flexible instructional practices that address individual learning strengths. The basic premise is that personalized instruction must begin with a knowledge of the learner across a variety of areas, including developmental characteristics, learning styles, and learning histories as well as personal interests and other background characteristics.

Palmer (1999) argues that we need to acknowledge that teaching and learning involve not only intellect and emotion, but also the human spirit. He believes that teaching and learning aren’t either intellectual *or* spiritual. He contends that teachers—regardless of their subject matter and who their students are—end up teaching who they are. The biggest challenge is to provide teachers with adequate time and support to reflect on questions worth living and sharing with their students.

You already know that time for self-reflection can renew and transform your teaching practices and the ways you relate to yourself and others. We teachers need opportunities to learn and change our minds. All of us can benefit from assessing our fundamental beliefs and assumptions about learners, learning, and teaching. If you are at the beginning of your teaching career, you will be able to incorporate what you learn from this book into your daily practice in a way that enriches you and your students. If you’re an experienced teacher, you will be able to identify

those learner-centered practices you already use in your classroom and ways to begin using those you haven't used before.

One of the most powerful aspects of using the learner-centered practices we describe in this book is the opportunity to experience first hand the importance of your students' perspectives on whether your teaching practices are meeting their academic and nonacademic learning needs. We encourage you to reflect on what you learn from your self-assessment and your students' perspectives on your teaching in order to determine how you can best develop positive relationships and learning climates that support your students' learning and motivation.

Sharing power and control with your students and viewing yourself as a learner assists your students in understanding that when learners of any age feel ownership of their learning, by virtue of having a voice and choice, they are more willing to learn and be involved in their learning (McCombs, 2000a). When your learning experiences show this to be the case, you will see the value of providing these experiences for your students. Once you have experienced the results of using the learner-centered principles, you will understand that the most effective learning involves providing your students (and yourself) with opportunities for choice when making personal connections with prior and new knowledge. In this way, you honor both yourself and your students.

As a way to chart your thinking as you read this book, you may wish to start a personal journal to record your ongoing reflections. Throughout

the book, we will ask you to reflect as a way to chart your progress as a learner as well as how your learning translates into ideas for your classroom. To help you begin your journaling, you may wish to read Jane Tompkins's essay, "Pedagogy of the Distressed," in which she describes her shift from viewing teaching as the process of dispensing information and learning as the process of receiving it to a perspective of learning as a shared process between teacher and students (Tompkins, 1990). Although Tompkins's experience was in a university setting, the process she describes is that of a teacher becoming learner centered.

Let's go back to the puzzle picture in Figure 1.1. If you had to teach your students how to "solve" pictures like this, how would you construct a lesson (or lessons) that incorporates what you've learned so far about learner-centered practices? How would your lesson (or lessons) reflect the learning strategies that you used to figure out the picture?

What's Next?

In Chapter 2, we describe in detail what we mean by "learner centered," using the perspective of education as a living system, the basic characteristics of schools as complex living systems, the characteristics of the Learner-Centered Model (LCM) and corresponding Learner-Centered Principles (LCPs), what the CPs mean for teaching and learning, what the evidence shows about characteristics of effective teachers, and the major factors affecting learners and learning.

Note 1

Here's what other people have said they think the picture shows:

A panda

A lion

A Dalmatian

Trees and islands

A view from space

A cowboy on a horse

Two people walking

An abstract painting

A girl in a bonnet

Note 2

Here's another picture constructed like the first one you saw.



Note 3

Unlike the usual figure-ground pictures, the information in this picture is in both the background (white) and the foreground (black). To see what it is, look at both the black shapes and at the white "spaces."



Note 4

Here's another copy of the picture puzzle for you to draw on. Use a light pencil to draw around some of the black and white shapes to see whether you can discover what the picture is.



Note 5

Cover the list of words below so that only the first word shows. See whether that gives you enough information to figure out the picture. If not, uncover the second word to see whether you have enough information then. Proceed down the list until you see what the picture is. Note: don't worry if you don't see it even after you read all the words; you're not alone—roughly 10% of people never see it, even with all kinds of clues!

Hat

Legs

Running

Tail

Hooves

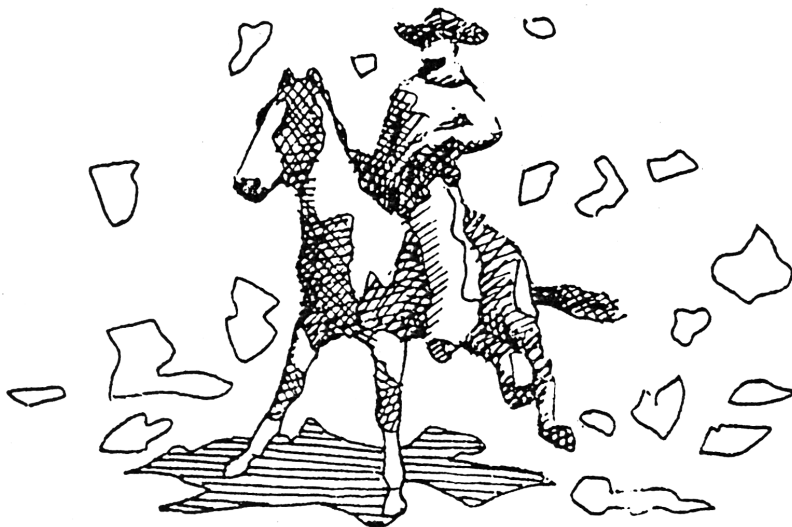
Man

Cowboy

Horse

Note 6

Here's the "answer" to the puzzle picture. Notice how the cowboy and horse in the original picture are depicted by both the black forms and the white "spaces."



Note 7

Here's the "answer" to the second picture.

