Mindful Learning

Ellen J. Langer[1]

Department of Psychology, Harvard University, Cambridge, Massachusetts

Abstract

Mindfulness, achieved without meditation, is discussed with particular reference to learning. Being mindful is the simple act of drawing novel distinctions. It leads us to greater sensitivity to context and perspective, and ultimately to greater control over our lives. When we engage in mindful learning, we avoid forming mind-sets that unnecessarily limit us. Many of our beliefs about learning are mind-sets that have been mindlessly accepted to be true. Consideration is given to some of the consequences that result from a mindful reconsideration of these myths of learning.

Keywords

mindfulness; mindlessness; learning

One of the primary issues in education today concerns the question of what should be taught in our schools. The research my colleagues and I have been conducting over several years now suggests that "what we teach" may be less important than "how we teach it." Moreover, the reconsidered rules for learning speak as much to learning outside the classroom as inside.

Whenever we attempt to learn something, whether it is a new content area, a sport, the way to play a musical instrument, or a new way to approach our businesses or our relationships, we rely on ways of learning that typically work to our detriment and virtually prevent the very goals we are trying to accomplish. The mind-sets we hold regarding learning more often than not encourage mindlessness, although learning requires mindful engagement with the material in question. Before examining some of these mind-sets, it may be useful to define mindlessness and mindfulness and briefly review the results of research that reveals some of the costs of mindlessness, to make apparent why we might want to pursue mindful learning.

MINDFULNESS AND MINDLESSNESS: DEFINITIONS

Mindfulness is a flexible state of mind in which we are actively engaged in the present, noticing new things and sensitive to context. When we are in a state of mindlessness, we act like automatons who have been programmed to act according to the sense our behavior made in the past, rather than the present. Instead of actively drawing new distinctions, noticing new things, as we do when we are mindful, when we are mindless we rely on distinctions drawn in the past. We are stuck in a single, rigid perspective, and we are oblivious to alternative ways of knowing. When we are mindless, our behavior is rule and routine governed; when we are mindful, rules and routines may guide our behavior rather than predetermine it.

We cannot have the felt experience of being mindless; that would require mindfulness. Therefore, most of us think that we are mindful. However, we spend much more time "not there" than we know, and the consequences for us are real and often profound. When we believe we are encountering something novel, we approach it mindfully. When we believe we know something well, we tend to view it mindlessly. As will become clear, there is power in uncertainty, yet most of us mistakenly seek certainty.

Experimental research, conducted over 25 years, reveals that the costs of mindlessness, and the benefits of mindfulness, are vast and often profound. Mindfulness results in an increase in competence; a decrease in accidents; an increase in memory, creativity, and positive affect; a decrease in stress; and an increase in health and longevity, to name a few of the benefits.

HOW DOES MINDLESSNESS COME ABOUT?

The way we initially learn sets us up for mindlessness or mindfulness. There are two ways mindlessness comes about: repetition and single exposure. The first is the more familiar way. If we repeat something over and over, we come to rely on our mind-set for how to accomplish the goal. For example, most of us have had the experience of driving a familiar route so often that the car seems to get to the destination by itself, without any active intervention by us. The second way mindlessness occurs is on initial exposure to information. If when first given information we process it without questioning alternative ways the information could be understood, we take it in mindlessly. When information is processed mindlessly, we essentially make a commitment to a single way of understanding it.

Even if it later would be to our advantage to view the information differently, if we learned it mindlessly, it will not occur to us to reconsider it.

MINDLESS VERSUS MINDFUL LEARNING

Most teaching unintentionally fosters mindlessness. Facts are typically presented as closed packages, without attention to perspective. Scientists know that research results in findings that are probably true given the context in which the work was tested (e.g., most of the time, under the stated circumstances, horses are herbivorous). When these findings are reported by teachers or in textbooks, they are translated from probabilities into absolute statements (e.g., horses *are* herbivorous) that hide the uncertainty. Consider how much more interesting and engaging statements of probability are; they tend to lead us to wonder about when the information may or may not be true, and even to consider how to change one fact to its opposite (e.g., when might horses eat meat? what are the advantages and disadvantages?).

Facts, whether derived from science or not, are not context-free; their meaning and usefulness depend on the situation. "What are the three reasons for the Civil War?" a high school teacher might ask. But from whose perspective should the question be answered? Surely, for example, a 30-year-old black woman from Georgia in 1865, a 60-year-old black male in Europe in 1953, and a white politician in 1968 would not all feel the same about the war's causes. Who decides what perspective is represented and why? The way information is typically given, it does not even occur to us to ask. Once we consider how information looks different from different perspectives, we become aware of the uncertainty inherent in our "context-free" facts.

When we ignore perspective, we tend to confuse the stability of our mind-sets with the stability of the underlying phenomenon: All the while things are changing and at any one moment they are different from different perspectives, yet we hold them still in our minds as if they were constant. If we get our cholesterol level checked, for example, and we are asked what it is, we give the same answer whether it was checked yesterday or a year ago—as if all the shellfish we had all summer and the exercise we failed to have in the winter made no difference. If our cholesterol level starts off low, we can keep it down by never checking it again! As another example, consider having mindlessly learned, as many of us have, that if the car starts to skid on a slippery surface, we should gently pump the brakes to minimize accidents. Many of us still do this while driving cars with antilock brakes. For these cars, however, the best way to avoid accidents is to firmly hold down the brakes. The context has changed, but mindlessly learned behavior typically does not.

Virtually all of our facts depend on context. For example, one plus one does not equal two in all number systems. More graphically, one wad of chewing gum plus one wad of chewing gum equals one wad of gum, not two. If we learn mindfully, we are more likely to realize this. In the following section, I describe how several myths or mind-sets we have about learning may actually detract from our ability to learn. I also discuss research and examples that suggest how mindful learning can turn these disadvantages into advantages (Langer, 1997).

MYTHS ABOUT LEARNING

Myth 1: The Basics Should Be Learned So Well That They Become Second Nature

According to this myth, we should learn "the basics" so well that they can be enacted mindlessly. If we do that, then it will not occur to us to change them when it would be advantageous to do so. (Whose basics are "*the* basics" anyway? Should a small woman approach a sport, e.g., the same way a very tall man does?) Several years ago, Alison Piper and I conducted research testing the idea that if we learn information mindfully when we first encounter it, we will be able to use the information in creative ways in the future (Langer & Piper, 1987). In that work, we introduced research participants to several different objects in a way we believed would encourage mindlessness (e.g., "This *is* a dog's chew toy") or in a manner we thought would encourage mindfulness (e.g., "This *could be* a dog's chew toy"). A need for an eraser then arose, and we were interested in seeing who would spontaneously think to use the "chew toy" in a creative way, as an eraser. The participants introduced to the object conditionally were the only ones to respond mindfully.

More recently, my colleagues and I taught research subjects a new sport, "smack-it ball," in which each hand wears a glovelike racket. One group was taught the game in the traditional absolute fashion, the other group was taught it in a conditional way to foster mindful learning. Rather than being told this *is* how you play smack-it ball, they were told, here is how it *could be* played—with language that suggested

Copyright © 2000 American Psychological Society

variation and perspective. After they were well practiced, we surreptitiously changed the ball they were using to one that was much heavier. Subjects who learned the game mindfully were more likely to accommodate to this change; that is, their performance did not suffer the way performance did for those who took the basics for granted and learned the game mindlessly. Given the way most people are taught to practice, the idea that "practice makes perfect" is questionable (cf. Langer & Imber, 1979; study by Pietrasz & Langer, described in Langer, 1997).

Myth 2: To Pay Attention to Something, We Should Hold It Still and Focus on It

My colleagues and I asked high school teachers and students what it means to pay attention to something. They all agreed that to successfully pay attention, people should hold the target of their attention still and focus on it the way they would focus a camera. There does not seem to be a problem of communication between teachers and students. The problem is this is essentially the wrong instruction. To test this, just bring your thumb up to your eyes for scrutiny. If you try to pay attention to your finger by holding the image of it still, you will quickly come to see how hard this is. The image fades from view. Instead, attend to your thumb mindfully—notice different things about your thumb—perhaps its size, a fleck of dirt, a spot of redness. It is easy now to pay attention.

In several studies, my colleagues and I asked subjects either to pay attention to a stimulus or to notice new things about the stimulus (i.e., to attend to it mindfully). Whether the subjects were elderly adults (Levy & Langer, in press), children with attention problems (Langer, Carson, & Shih, in press), or even Harvard undergraduates (Bodner & Langer, 1995), when they were instructed to vary the target of attention, their performance improved. Not only is it easier to pay attention this way, but people remember more about the target of their attention when they attend to it mindfully (study by Lieberman & Langer, described in Langer, 1997), and they like the target of their attention better after having done so, as described next.

Myth 3: It Is Important to Learn How to Delay Gratification

This idea suggests that tasks are inherently good or bad. To get through the bad ones, we should look forward to the good ones, or perhaps "add a little sugar to help the medicine go down." However, evaluation does not reside in tasks; it resides in our minds. Work and study are not negative, although we may make them appear to be. My colleague Sofia Snow and I asked subjects to evaluate how humorous cartoons were. For half of the subjects, we called the activity work; for the other half, we referred to it as play. Even though the task we used could seem inherently fun to some people, when we called it work, subjects did not enjoy it, and their minds tended to wander while they were doing it (see Langer, 1997).

In other experiments, subjects engaged in tasks they did not like (listening to rap music or classical music, viewing art, watching football). Some of the subjects were led to engage the task the way they typically did; others were asked to notice three, six, or nine new things about it. The more they noticed, the more they liked the task. Mindful learning engages people in what they are learning, and the experience tends to be positive (Langer, 1997; cf. Fox & Langer, 1999).

CONCLUDING THOUGHTS

Most of us believe that it is good to be in the present, to be involved in what we are doing, and that it is good to keep our minds active. The problem is that we are typically unaware of when we are not in the present and when our minds are virtually closed. The simple process of mindful learning, of actively drawing distinctions and noticing new things—seeing the familiar in the novel and the novel in the familiar—is a way to ensure that our minds are active, that we are involved, and that we are situated in the present. The result is that we are then able to avert the danger not yet arisen and take advantage of opportunities that may present themselves. Teaching mindfully not only sets students up for these advantages, but has advantages for teachers as well.

Respect for diversity often creates a dilemma regarding the choice of teaching material. How can teachers find material that will be meaningful to people with such different cultural backgrounds as we find in many of our schools? What is exciting about the research I have discussed is the implication that if the content of the material encourages mindful learning, rather than freezing the material in one rigid perspective, students more easily may be able to make the material relevant to their idiosyncratic concerns.

Should all learning, beginning with children's earliest experiences, proceed in this conditional fashion? Or do we need to teach all (or some? and if some, which?) children stability first so they will not be overwhelmed by all the possibility mindful learning theoreti-

cally makes available? Some people (e.g., Bargh & Chartrand, 1999) believe that mindlessness is important because it frees limited cognitive resources. This might be true, but it raises the question, "At what cost?" (return to the example of antilock brakes). These are matters still to be determined. My own view is that we are poorly served by mindless learning. So that we do not prematurely close the future, we should at least consider that all of our learning be mindful or potentially mindful (i.e., not mindless). Perhaps we only believe that we need certainties, because that is the way we ourselves were taught.

Recommended Reading

Langer, E. (1989). *Mindfulness.* Reading, MA: Addison Wesley.
Langer, E. (1997). (See References)

Note

1. Address correspondence to Ellen J. Langer, William James Hall, 33 Kirkland St., Harvard University, Cambridge, MA 02138; e-mail: langer@wjh.harvard.edu.

References

Bargh, J., & Chartrand, T. (1999). The unbearable automaticity of being. *American Psychologist*, *54*, 462–479.
Bodner, T., & Langer, E. (1995). *Mindfulness and attention*. Cambridge, MA: Harvard University Press.
Fox, B., & Langer, E. (1999). *Mere exposure versus mindful exposure*. Unpublished manuscript, Harvard University, Cambridge, MA.
Langer, E. (1997). *The power of mindful learning*. Reading, MA: Addison-Wesley.
Langer, E., Carson, S., & Shih, M. (in press). Sit still and pay attention? *Journal of Adult Development*.
Langer, E., & Imber, L. (1979). When practice makes imperfect: The debilitating effects of overlearning. *Journal of Personality and Social Psychology*, *37*, 2014–2025.
Langer, E., & Piper, A. (1987). The prevention of mindlessness. *Journal of Personality and Social Psychology*, *53*, 280–287.
Levy, B., & Langer, E. (in press). Improving attention in older adults. *Journal of Adult Development*.

Copyright © 2000 American Psychological Society