

Mindfulness Definitions

There are a number of ways to describe mindfulness. Here are a few definitions.

Mindfulness- being consciously aware of one's own thinking and using that consciousness not only on the task at hand but also to be aware of one's experience (Iberlin, 2017).

Mindfulness- Paying attention in a particular way; on purpose, in the present moment, and nonjudgmentally (Jon Kabat-Zinn, 1994).

Mindfulness Mindfulness means maintaining a moment-by-moment awareness of our thoughts, feelings, bodily sensations, and surrounding environment, through a gentle, nurturing lens. Mindfulness also involves acceptance, meaning that we pay attention to our thoughts and feelings without judging them—without believing, for instance, that there's a “right” or “wrong” way to think or feel in a given moment (<https://greatergood.berkeley.edu/topic/mindfulness>).

The 5 core principles of mindfulness according to Jon Kabat-Zinn:

1. A heightened awareness of internal and external experiences including thoughts, smells, feelings, the body, and sights
2. A non judgemental observation of those experiences
3. Compassion towards self
4. The development of openness and curiosity toward internal and external experiences.
5. The ability to return to the present as thoughts arise.

Understanding Mindfulness in a School Setting

Source: Cultivating Mindfulness in the Classroom by Jeanie M. Iberlin

<u>Mindfulness is...</u>	<u>Mindfulness is Not...</u>
• Historically based in Buddhist and Hindu practices • Supported by psychological research and evidence • The habit of being aware of one's own thinking and emotions in a nonjudgmental way • Focused on attention to the present moment instead of ruminating on the past or future • A way to strengthen one's attention and focus • Effective for managing stress • Helpful for increasing positive feelings toward oneself and others • Inclusive of many strategies and activities	• A religious practice • Associated with any particular set of beliefs • A spiritual or supernatural activity • The same as or limited to meditation • Time consuming or expensive

Terms Associated with Mindfulness

The 5 Key categories of mindfulness benefits:

1. **Stress reduction-** helps students and adults find an inner clam. An increase in gray matter in the parts of the brain that manage stress, emotions, learning, and self-awareness leads to lower levels of stress and anxiety.
2. **Attention-** increases attentional capabilities and promotes stable attention spans. The ability to ignore distractions and have a longer duration of attentive focus.
3. **Emotional control-** Ability to moderate ones thoughts, actions, and emotions in response to experiences. Decrease ruminating thoughts while increasing the ability to choose where to put one's attention. Mindfulness helps participants view thoughts, feelings, and bodily sensations as events that come and go.
4. **Positive self-concept-** to see thoughts as objects to observe and can effectively detach from negative thoughts about their self-image.
5. **Positive interactions-** mindfulness promotes the ability to be receptive to new ideas or suggestions, become more aware of the communication, emotion and thoughts of others. This leads to development of social skills and perspective taking.

The 5 Emotional and Social competencies by Daniel Goleman are:

1. **Self-awareness** - being aware of one's own feelings and using this to make decisions. With self-awareness one has the ability to recognize feelings such as anxiousness, tiredness, irritability, or depression.
2. **Self-regulation** - the ability to recognize when one needs to take steps to change their state of being or situation.
3. **Self-motivation** -state of mindfulness that enables a person to set goals, take the steps toward their goals, and eventually achieve those goals.
4. **Empathy** - understand how others are feeling
5. **Social Skills** - feel comfortable in social situations. Understanding how to interpret the actions of others.

Mindfulness and Psychology

Neuroplasticity- The brain's ability to adapt, organize, and reorganize the neural pathways from new experiences (Diamond & Hopson, 1998). When an event or experience repeats, neural networks form that facilitate quicker and easier neural responses.

Neurotransmitters and hormones: are two types of chemicals that act as messengers across different systems of the body. The production of these chemicals influence emotional responses and physical reactions to external events (Jensen, 2005; Sousa, 2011).

Neurotransmitters act within the nervous system and enable communication between the neurons that make up the brain, spinal cord, and the nerves.

Hormones- belong to the endocrine system and carry messages to organs through the bloodstream (Iberlin, 2017).

Major Emotional Chemicals and their Function

(chart adapted from Cultivating Mindfulness in the Classroom by Janie M. Iberlin.)

Name	Type	Function
Cortisol	Hormone	Supplies energy; adjusts physiological processes. A threat-response hormone, which is released in response to stresses. It adjusts physical processes in the body such as digestion and the immune system, for a fight-or-flight reaction. Long-term elevated stress and cortisol levels are associated with many mental and physical health issues, including anxiety, headaches, weight gain, and heart disease (Mayo Clinic, 2016). Mindfulness can show a significant decrease in cortisol levels when practiced consecutively. This can help reduce depressive symptoms and decrease anxiety.
Epinephrine	Hormone	Alerts all systems; increases heart rate and breathing. Involved with the body's fight-or-flight responses to stressors. During fight-or-flight response, sensory input is processed by the emotional centers of the brain (amygdala and hippocampus) rather than by the rational prefrontal cortex region of the brain. Stress impairs learning.
Dopamine	Neurotransmitter	Produces pleasure. Released during pleasurable, rewarding experiences, including learning. When thoughts are positive then mindfulness can help a person be consciously tuned into these positive feelings. When thoughts are negative then mindfulness can teach a person to consider the thoughts without any judgement.
Serotonin	Neurotransmitter	induces calm and regulates mood and attention

Mindfulness and the Brain

Neuroplasticity is the ability of the brain to change itself (Burdick). I like the analogy about the grass turning into a worn path from all of the traffic. The neuronal pathways get stronger with repetition and therefore mindfulness practice provides a way to create more healthy pathways in the brain.

The Prefrontal Cortex (PFC) acts as the conductor for the brain and carries out executive functions such as planning, organizing, regulating attention, decision making, moderating behavior, personality expression, motivation, and mood regulation. Deep Breathing practices have been linked to more activation of the PFC. Breathing techniques might be particularly helpful for people who suffer from ADHD, anxiety, or depression.

The Amygdala is associated with fear responses and acts as the security guard for our brains. Mindfulness enables a decrease in stress, which can decrease the grey matter density of the amygdala. This will increase a feeling of calm and clarity.

The Insula is involved with sensing body states such as the state of the gut, heart, and pain. It is involved in sensing when a person has to use the bathroom or an increasing heart rate when exercising, or sensations of warmth and coldness on skin. Mindfulness can change the actual structure of the insula, specifically the right insula. This can give increased accuracy for cognitive control, self-awareness, and all of the other sensing that the insula is connected to in the body.