

# Stereotype and Bias in Education

*Formulating strategies to reduce impacts on learners*



Photos by Christelle Chenard

---

By **Stephanie-Ittle-Clark**

---

**B**IAS IS A DIRTY WORD in all quality education. As educators, we want to help our learners recognize systems that both positively and negatively impact people, animals, and the planet we share so that they may make decisions that align with their personal values. At the core of environmental education is the desire to “present a balance of environmental, economic, and social perspectives... taught through...critical thinking skills, while avoiding...bias regarding what to think about the issue”<sup>1</sup> To this end, our job is to teach more than scientific literacy skills or facts about the environment; we must also teach our students to analyze information and understand what it represents as well as to recognize material that may carry an agenda or bias. This includes teaching them to know not only when stereotypes are presented by others, but the skills to think metacognitively so they can recognize individual unconscious stereotypes they may have about people, animals, or places. Let’s explore what stereotype and bias look like, why they happen, how they impact education, and ways we can reduce stereotype and bias in our own practice.

## What causes stereotypes and bias?

As educators we need to first understand the hidden power of stereotypes before we can make sure they are not causing bias in our teaching. This is especially important if an educator is part of a majority group with more social, economic, or political power than a minority one. Unconscious stereotypes can limit opportunities for learners if they are present in curriculum or guiding educator reactions or actions.

So, what exactly is a stereotype? Stereotypes are overgeneralized beliefs, often unconscious, that people have about a group. Beliefs about groups develop during childhood as we receive information from parents, significant adults, peers, personal experience, and the media. It is equally important to know is that our brains are constantly trying to categorize information as it is received. As humans have evolved over time, our brains have been wired for these cognitive shortcuts and to be alert to signals that may mean a threat is near. For example, if you see a person approaching, the brain instantly classifies the face using categories such as gender, race, age, and social status. These are primitive categories about features we can quickly see. “Next, the brain immediately and unconsciously activates everything it knows (or believes it

knows) about people belonging to the categories”<sup>2</sup>. These categorizations allow the brain to determine if the face belongs to a group similar to you (in-group) or if there is a threat from an outside group. This same process occurs over and over each day.

It is cognitively efficient for the brain to categorize. The problem with stereotypes is that they cause bias, which is an action based on the belief that a stereotype is true. Bias impacts our choices and behaviors without conscious knowledge. These unconscious biases can create a dichotomy or contrast, meaning that actions we take and choices we make are not aligned with how we wish to act and what we consciously believe. Schools consist of a variety of students and backgrounds, and unconscious beliefs may make us generalize a whole group and stop us from seeing the individual — and these unconscious beliefs can have detrimental effects on how we connect with learners and even the ways information about environmental issues and animal habitats are taught.

### Effects of bias on learners

When we act based on overgeneralized social stereotypes (most of the time without realizing it), this is implicit bias. The gap in thinking caused when our brain tries to categorize or generalize can have significant impacts on our personal teaching practice and on our learners. Let’s take a look at a few of the influences that can impact our work:

- **Generalization:** Mentioned earlier, this is one effect of stereotyping and bias. When the brain generalizes, we separate ourselves from others and have less empathy for the people — or, in an environmental education context, the non-human animals, or species — in the generalized group because all individuality is removed.
- **Self-fulfilling prophecy:** This occurs when we believe an inaccurate thing about a person, non-human species, or place and only look for those things that reinforce our beliefs. As educators, we need to be careful that we are not seeking out information that proves the bias.
- **Stereotype threat:** Though not specific to environmental education, this is a form of bias that applies to multiple educational settings and can greatly influence learner success. When individuals are aware of negative stereotypes about them or their social group, it can undermine their performance. Sadly, stereotype threat means that when learners hear that they are not supposed to be good at something, they underperform, often unconsciously. On the other hand, if they are supposed to be good at something or if someone believes in them, they are more likely to do well. Students want their educators to believe in them and students perform best in situations where there are high expectations.
- **Bias in curriculum and materials:** Who writes curriculum? People, of course! Since we know that implicit bias is present in every person, it is important to review teaching materials to make sure there is no accidental (or intended) bias. Some things to look for include loaded words (wording that attempts to influence an audience by appealing to emotion or stereotypes), misleading reporting of studies, or omitted reporting of information. For

example, if teaching about the environmental impact of air or water pollution, it is important to include an inter-disciplinary approach with fields such as geography, ecology, and earth science represented as well as to bring in materials from sociological studies and public health topics. Effective teaching materials present both sides of an issue and provoke the learner to form their own opinion.

Thinking about curriculum-embedded stereotype, bias, and possible hidden messages that could convey prejudice and/or limit beliefs can be overwhelming. A simple example is if I asked you to think about the hyena and to come up with a resource that presents this animal in a positive light. It sounds simple, but a majority of traditional tales and even movies present them with negative messaging, even though they are an important part of the African ecosystem. This subtle stereotype can actually impact the language used in lessons and, more broadly, environmental protections of hyenas’ homeland.

As educators, we have a big job. Not only are we being asked to reflect upon our own stereotypes and review teaching materials to make sure they are inclusive, but we also want to teach our learners to recognize stereotypes and bias. Luckily, there are steps we can take to strengthen the part of the brain that thinks critically!

### Strategies for overcoming bias

In order to remove bias from the classroom and to teach our students how to recognize it, we first need to explore the two systems of the brain that influence how we process information. The first system is fast-acting and tries to categorize information without reflection. It is always working and processing information we receive. The second system is slower-acting and allows us to think more critically.<sup>3</sup> Bias occurs when we allow the fast-acting part of the brain to categorize people, animals, and places based on stereotypes that generalize an entire group, assuming all individuals or components in that group are the same.

While it is no wonder that the fast-acting system in the brain is so strong since we categorize from the time we are young with shapes, colors, etc., as critical educators we want to slow the brain down and help our learners strengthen the second system. Unconscious bias is difficult, if not impossible, to fully extinguish; however, a number of studies suggest that human brains are plastic enough to be nudged away from prejudiced thinking by gentle cognitive cues.<sup>4&5</sup> Just being exposed to more diverse environments and narratives of diversity can often provide recognition cues to help people identify bias and counteract the cognitive effects of implicit bias.

Educators can help learners to override System 1 of the brain and strengthen slower-processing System 2 to build critical thinking skills by provide alternatives to stereotypes as well by allowing time for reflection. This all must be done in a way that does not cause too much anxiety or dissonance; consider the following strategies:

- **Model metacognitive processing.** Use examples to illustrate your thinking and discuss if an initial conclusion is fair and equitable or if it is based on incorrect information.

- Paraphrase (out loud) the meanings you hear in what others say, so that you can check if you are understanding correctly or if any stereotype is impacting mental processing.
- Provide exposure to different experiences and materials in teaching materials. Include a variety of people, animals, and locations to create context for learners and to help them see similarities to themselves and their own experiences.
- Build perspective! Ask learners to think what it would be like to live in the shoes of another and to look for things they have in common with others. Perspective-taking is a cognitive and affective exercise and is a social-emotional-intellectual skill. Help learners develop this skill by teaching skills like observation and evaluation.
- Practice mindfulness together.
- Use stories told by others or told from their perspectives. Stories connect well with the way the brain processes information and are a powerful means of helping us see similarities.
- Increase micro-affirmations toward all learners and increase the positive lens used to describe often-maligned groups, regions, or species (e.g., snakes and spiders).
- End use of generalizations — recognize individuality of all beings. Teach learners how to see the individual differences in features and personalities. Give learners a chance to see many types of faces with various emotions being shown or allow them to visit locations that are different from their own through virtual reality, photos, or videos.
- Teach learners how to read curriculum content and advertisements critically to identify any agenda.
- Utilize a variety of races, genders, non-human species, cultures, etc. in teaching resources. Ensure there is a chance for learners of all types to see themselves positively in materials and that there is no bias toward any specific audience in the overall collection.



We may never be able to remove all implicit biases from our educational world, but we can take steps to counteract stereotypes and increase equity. As educators dedicated to protecting the environment, we can empower learners to think critically, analyze content, and practice inclusive perspective-taking so they are reflecting not only on personal impact, but on how world systems impact all species and places. Our current students will be the decision-makers of tomorrow. We can give them the tools to think globally so that bias does not restrain their motivations and attitudes towards a specific region or community. Along with using some of the tips above to reduce bias in education, you may wish to learn even more about this important topic. There are numerous resources and professional development items available. A few recommendations include the book *Blind Spot: Hidden Biases of Good People* by psychologists Mahzarin R.

Banaji and Anthony G. Greenwald, the online course *Magic of Stories: Encouraging Empathy through Narrative* ([www.prosocialacademy.org/ches](http://www.prosocialacademy.org/ches)) from the Academy of Prosocial Learning, and classroom resources from *Teaching Tolerance* ([www.tolerance.org/classroom-resources](http://www.tolerance.org/classroom-resources)).

**Stephanie Itle-Clark** is a former public school teacher and the founder and president of the Academy of Prosocial Learning in Connecticut where she specializes in humane pedagogy, empathy development, and prosocial education.

#### Endnotes:

1. NSTA, EE. (2003). Standards for science teacher preparation. Retrieved from <http://static.nsta.org/pdfs/NSTAstandards2003.pdf>.
2. Begley, S. (2016, para 3). Beware your biased brain. Retrieved from <https://www.mindful.org/beware-biased-brain/>.
3. Kahneman, D. (2011). *Thinking, fast and slow*. New York, NY: Farrar, Stratus and Giroux.
4. Lai, C. K., Marini, M., Lehr, S. A., Cerruti, C., Shin, J. L., Joy-Gaba, J. A., Ho, A. K., Teachman, B. A., Wojcik, S. P., Koleva, S. P., Frazier, R. S., Heiphetz, L., Chen, E., Turner, R. N., Haidt, J., Kesebir, S., Hawkins, C. B., Schaefer, H. S., Rubichi, S., Sartori, G., Dial, C. M., Sriram, N., Banaji, M. R., & Nosek, B. A. (2014). Reducing implicit racial preferences: I. A comparative investigation of 17 interventions. *Journal of Experimental Psychology: General*, 143, 1765-1785.
5. Stewart, B. & Payne. (2008). Bringing automatic stereotyping under control: Implementation intentions as efficient means of thought control. *Personality and Social Psychology Bulletin*, 34(10):1332-45.