





Teaching – It’s a No Brainer, Right?: Using an Assessment Course to Bust Educators’ Neuromyths

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The brain is a very complex part of our bodies. Learning about how the brain works can be challenging. Sometimes, people believe wrong ideas about the brain, which can be called “neuromyths.” Here are some common neuromyths that people think are true but are not:

(1) Learning Styles: Some people think that students learn best in one way, for example, only by seeing things, hearing things, or doing things with their hands. But this is not true.

(2) Teaching to Learning Styles: Some people think that teachers should explain lessons in a way that matches how a student likes to learn. This does not really help students learn better.

(3) Left-Brain vs. Right-Brain: Some people say that if you use your left brain more, you are good at mathematics and logic, and if you use your right brain more, you are creative. This is not true.

(4) Handedness and Brain Dominance: It is also not true that if you are right-handed, you use your left brain more, or if you are left-handed, you use your right brain more.

(5) Classical Music and Intelligence: Playing classical music to kids will not make them smarter.

(6) 10% of the Brain: It is incorrect that people only use only 10% of their brain. We use all of it.

(7) Infant-Directed Speech: Talking to babies in a high-pitched, slow way, which we often do, is actually good for their development, not harmful.

(8) Brain Development Stops in Adolescence: The brain continues to grow and change well into adolescence.

(9) Brain Change After Childhood: The brain can keep changing throughout your whole life, not just when you are young.

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(10) Permanent Brain Damage: Some people think that once the brain is damaged, it is irreversible, however, sometimes the brain can heal itself after an injury.

Even though these ideas are not true, many people still believe them. These myths spread because information about the brain can be confused or oversimplified. Researchers write about the brain in complicated journals that can be hard to read and often cost money to access. This makes it difficult for teachers and students to get the right information about the brain.

Teachers sometimes use these myths in the classroom. For example, they might ask students how they like to learn and then try to teach in that way. But since learning styles do not really help, this may not be good for students.

Researchers have tried to dispel these myths, but it has not been successful. Some say brain scientists should talk to teachers more. Others think teachers should learn about the brain themselves. We think a better way is to do both and teach people how to check whether the information they hear is true. In this way, teachers can find the best sources to learn about the brain and its relationship to teaching and learning.

In our study, we wanted to help future teachers learn the truth about the brain. We started by asking them what they knew about brain myths. Throughout the year, we talked about different sources of information, such as what they heard in class, on the news, or from friends. We showed them how to find good information and how to recognize incorrect information. We even had a brain researcher come and talk to them.

At the end of the year, we asked the students about brain myths again. We also asked them to write about their thoughts and saved some of their work from the year. We found that by the end of the year, they believed in fewer neuromyths and were better at thinking critically. This shows that by continuously talking about the brain in different and easy-to-understand ways, we can help teachers learn the truth and make effective decisions in their classrooms.