



PINPOINT



*Ever tried. Ever failed. No matter.
Try again. Fail again. Fail better.*

Samuel Beckett

Errorless learning?

It is a teacher's myth that if students make mistakes it will prevent, or at least slow down, their learning the correct information. On the contrary. Research reported in the Scientific American revealed that students learned more after having made mistakes.

Direct students to ask and answer questions about a piece of text before reading it. Then after reading it in detail, get them to answer the same questions again and note the differences. The contrast makes the learning significant and memorable.



An expert is a person who has made all the mistakes that can be made in a very narrow field.

Neils Bohr

Classroom culture

Alexander's study of classrooms in different countries, highlighted the less than optimal culture in British schools. Mistakes are considered to be *embarrassing*. Consequently teachers seek to minimise the student *losing face* in public. The emphasis is on the correct answer and defending one's public identity. Nothing could be worse for developing a true culture of learning. This contrasts starkly with other countries.

Sports psychology

There is much to learn from how sports people respond to making errors. Psychologists train sports people by directing them to make intentional errors in order to test how they deal with them. All emotional content is gradually removed to allow for a positive and rationale response.

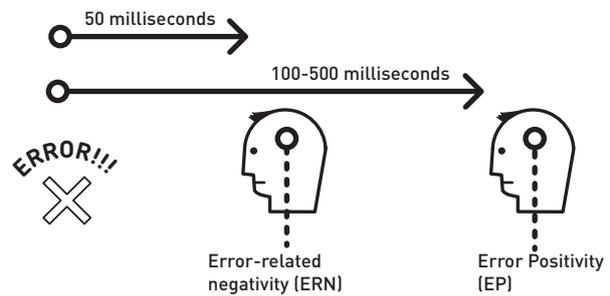


I've missed more than 9000 shots in my career. I've lost almost 300 games. 26 times, I've been trusted to take the game-winning shot and missed...I've failed over and over and over again in my life. And that is why I succeed.

Michael Jordan

Responses to errors

Neuroscientists have measured the brain's responses to making errors. This is what they found.



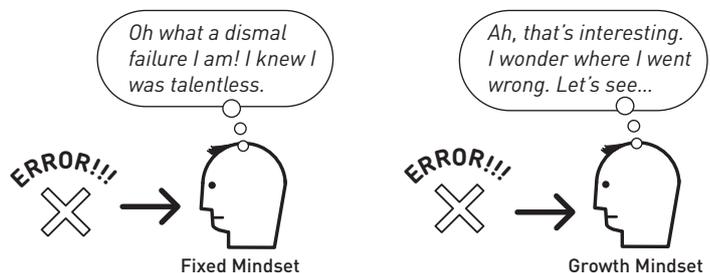
Upon noticing an error, we have an immediate negative response. This is as it should be, as it is something we don't want to see and are disappointed. Subsequently, there is a response in which we pay more attention to the error itself.

John Moser's 2011 research showed that subjects learned more effectively when they experienced both a longer ERN moment and a more consistent EP response.

It seems we learn best, then, when we pay attention to our errors and avoid any emotional reaction. This needs practice.

Mindset

Carol Dweck's model of Growth and Fixed mindsets is perfectly placed to address directly students' responses to making errors.



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