

How to Learn? From Mistakes

Part 1

I have been teaching for a long time, and in doing so have acquired **a body of knowledge**¹ about kids and learning that I really wish more people would understand about the potential of students. In 1931, my grandmother—bottom left for **you guys over here**²—graduated from the eighth grade. She went to school to get the information because that’s where the information lived. It was in the books; it was inside the teacher’s head; and she needed to go there to get the information, because that’s how you learned. **Fast-forward**³ a generation: This is the one-room schoolhouse, Oak Grove, where my father went to a one-room schoolhouse. And he again had to travel to the school to get the information from the teacher, stored it in the only portable memory he has, which is inside his own head, and take it with him, because that is how information was being transported from teacher to student and then used in the world. When I was a kid, we had a set of encyclopedias at my house. It was purchased the year I was born, and it was extraordinary, because I did not have to wait to go to the library to get to the information. The information was inside my house, and it was awesome. This was different than either generation had experienced before, and it changed the way I interacted with information even **at just a small level**⁴. But the information was closer to me. I could get access to it.

[. . .] Fast-forward to Pennsylvania, **where I find myself today**⁵. I teach at the **Science Leadership Academy**⁶, which is a partnership school between the Franklin Institute and the school district of Philadelphia. We are a **9 through 12**⁷ public school, but we do school quite differently. I moved there primarily to be part of a learning environment that validated the way that I knew that kids learned, and that really wanted to investigate what was possible when you are willing to let go of some of the paradigms of the past, of information scarcity when my grandmother was in school and when my father was in school and even when I was in school, and to a moment when we have information surplus. So what do you do when the information is all around you? Why do you have kids come to school if they no longer have to come there to get the information?

Part 2

In Philadelphia we have **a one-to-one laptop program**⁸, so the kids are bringing in laptops with them every day, taking them home, getting access to information. And here’s the thing that you need to get comfortable with when you’ve given the tool to acquire information to students, is that you have to be comfortable with this idea of allowing kids to fail as part of the learning process. We deal right now in the **educational landscape**⁹ with an infatuation with the culture of one right

¹ Having “a body of” something refers to a large amount of it.

² When Laufenberg says “you guys over here,” she is addressing her audience directly, to explain where her grandmother is in the picture.

³ Laufenberg uses the term “fast-forward” a couple of times during her talk to explain the passage of time in her story.

⁴ A synonym for “at a small level” is “on a small scale.”

⁵ When Laufenberg says “where I find myself today,” she is referring to her workplace, the school she now works at, and not to the TED conference venue.

⁶ Students can find out more about her school at scienceleadershipacademy.org.

⁷ The expression “nine through 12” refers to the high school years. The four years of high school in the U.S. are ninth, tenth, 11th, and 12th grades.

⁸ A “one-on-one laptop program” means that every student in the school is given a laptop to use by the school.

⁹ The noun “landscape” is used here to describe the state of a particular subject. In this case, it’s education.

answer that can be **properly bubbled**¹⁰ on the average multiple-choice test, and I am here to share with you: It is not learning. That is the absolute wrong thing to ask, to tell kids to never be wrong. To ask them to always have the right answer doesn't allow them to learn. So we did this project, and this is one of the artifacts of the project. I almost never show them off because of the issue of the idea of failure.

My students produced these infographics as a result of a unit that we decided to do at the end of the year responding to the oil spill. I asked them to take the examples that we were seeing of the infographics that existed in a lot of mass media, and take a look at what were the interesting components of it, and produce one for themselves of a different man-made disaster from American history. And they had certain criteria to do it. They were a little uncomfortable with it, because we'd never done this before, and they didn't know exactly how to do it. They can talk—they're very smooth, and they can write very, very well, but asking them to communicate ideas in a different way was a little uncomfortable for them. But I gave them the room to just do the thing. Go create. Go **figure it out**¹¹. Let's see what we can do. And the student that persistently turns out the best visual product did not disappoint. This was done in like two or three days. And this is the work of the student that consistently did it.

And when I sat the students down, I said, "Who's got the best one?" And they immediately went, "There it is." Didn't read anything. "There it is." And I said, "Well, what makes it great?" And they're like, "Oh, the design's good, and he's using good color. And there's some . . ." And they went through all that we processed out loud. And I said, "Go read it." And they're like, "Oh, that one wasn't so awesome." And then we went to another one—it didn't have great visuals, but it had great information—and spent an hour talking about the learning process, because it wasn't about whether or not it was perfect, or whether or not it was what I could create. It asked them to create for themselves, and it allowed them to fail, process, learn from. And when we do another round of this in my class this year, they will do better this time, because learning has to include an amount of failure, because failure is instructional in the process.

[. . .] The main point is that if we continue to look at education as if it's about coming to school to get the information and not about experiential learning, empowering student voice, and embracing failure, we're **missing the mark**¹². And everything that everybody is talking about today isn't possible if we keep having an educational system that does not value these qualities, because we won't get there with a standardized test, and we won't get there with a culture of one right answer. We know how to do this better, and it's time to do better.

This is an edited version of Laufenberg's 2010 TED Talk. To watch the full talk, visit TED.com.

¹⁰ "Properly bubbled" is used here to refer to students guessing the right answer with no real knowledge.

¹¹ To "figure something out" means to come to understand it or solve it.

¹² To "miss the mark" in a situation means to fail to achieve the intended result.