

My Five Principles of Teaching

(To make it Fun (kef) with Jeff)

I'm going to lay out my five principles for successful teaching and learning and for a successful life. Teaching, learning and life all go together. Jeff Bezos, founder of Amazon, gave a speech which I heard. I'd like to adopt some of the principles I heard from him in order to outline the principles that guide me when I'm thinking about teaching and learning.

Bezos states that his most important core value is customer obsession as opposed to competitor obsession. He says that the customer is never satisfied, and trying to make him/her satisfied will move you along in your quest to improve and provide the best service possible.

Malcolm Gladwell, in his book **Outliers**, believes that what pushed the Beatles to greatness was their obsession for entertaining their fans, especially during the early years when they travelled to Hamburg, Germany to perform. Performing in Hamburg for a foreign audience, forced them to work really hard and to expand their repertoire of music. I'll be talking shortly about how expanding your repertoire can make for a more satisfying experience for your students.

And what was so special about Hamburg? It wasn't that it paid well. It didn't. Or that the acoustics were fantastic. They weren't. Or that the audiences were savvy and appreciative. They were anything but. It was the sheer amount of time the band was forced to play.

Here is John Lennon, in an interview after the Beatles disbanded, talking about the band's performances at a Hamburg strip club called the Indra:

We got better and got more confidence. We couldn't help it with all the experience playing all night long. It was handy them being foreign. We had to try even harder, put our heart and soul into it, to get ourselves over.

In Liverpool, we'd only ever done one-hour sessions, and we just used to do our best numbers, the same ones, at every one. In Hamburg, we had to play for eight hours, so we really had to find a new way of playing.

played 48 times, for a total of 172 hours on stage. The last two Hamburg gigs, in November and December of 1962, involved another 90 hours of performing. All told, they performed for 270 nights in just over a year and a half. By the time they had their first burst of success in 1964, in fact, they had performed live an estimated twelve hundred times. Do you know how extraordinary that is? Most bands today don't perform twelve hundred times in their entire careers. The Hamburg crucible is one of the things that set the Beatles apart.

"They were no good onstage when they went there and they were very good when they came back," Norman went on. "They learned not only stamina. They had to learn an enormous amount of numbers—cover versions of everything you can think of, not just rock and roll, a bit of jazz too. They weren't disciplined onstage at all before that. But when they came back, they sounded like no one else. It was the making of them."

Like the Beatles, I work hard to expand my repertoire of stimulating, challenging and unusual problems, activities and games. I want to provide my students with interesting problems that they are motivated and curious to solve. They should also be interested in learning the math behind the problems and enjoy understanding how these problems connect to previous problems that they have solved. Often when students are solving a problem, they will try to find a pattern, make generalization and then prove it. I strive to find problems with a "low-ceiling" - problems that students of different abilities can all gain something from them. So, my students come to class excited to find out what new problems and games they will encounter. When exploring interesting problems, I want them to learn things on their own. They should experience "light bulb" moments when they have figured something out on their own. I can make sure that this process occurs by asking good questions and giving them quiet time to think.

I think about the following two questions a lot: How can I delight my students in class? How can I help them grow? First, I can keep them active. I can talk less, and they can do more. I send students to whiteboards that hang on the walls around the classroom. The students are standing solving problems. They can make mistakes and easily correct them, and they can share their ideas with their friends and neighbors. I can easily see what all of them are doing. Frequently they are playing math games against each other on the board which they enjoy. When solving problems in math, making drawing help a lot to better understand the problem. Solving problems on the whiteboard lends itself to making colorful drawings.

It's important for students to work in small groups that way they can participate freely and learn from one another. In math, it's essential to be a flexible problem solver, and to learn different ways of attacking a problem. It's also important to be able to express yourself. Harvard College talks about what they look for in applicants: We seek to identify students who will be the best educators of one another and their professors—individuals who will inspire those around them during their College years and beyond.

Students should know that I care about them – that I want them to succeed, to gain confidence and to feel good about their ability to solve problems on their own. By setting high standards, and by providing a framework for them to succeed, I am showing them that I care.

I love the quote “Listen then talk”. That sums up the first core value of customer/student obsession. If we listen to what our students have to say, we are in a better position to help them.

The second core value after student/customer obsession is what Bezos call “fending off Day 2” or in other words “it’s always Day 1”. I like this second core value because it encompasses a lot of important characteristics of successful teaching and learning. When it’s Day 1, you experiment, you are eager to invent new things and make the most of your opportunities, and you try new things. You aren’t afraid to fail, and if you do fail you realize that it’s part of the learning process. You are open to fixing your mistakes. It’s important that students feel safe in class to make mistakes, and that they venture down new avenues of exploration. Also, as teachers and students we need to feel safe to be ourselves. (see quote from Picasso in Final Notes)

When it’s Day 1, it’s ok to be confused. It helps students to see their teacher confused, and see how he/she deals with confusion in a positive manner. Students should see that you are willing to solve new and challenging problems.

During Day 1, you’re enthusiastic about what you’re doing. Because of the “Day 1” mentality, teaching for me is not a job or a career, it’s a “calling”. It’s something you care deeply about, and you can’t stop thinking about it.

With a “Day 1” mentality, we are always looking to make the most of the opportunities that come our way. Here Harvard College talks about another attribute that they look for in their applicants:

“Most of all we look for students who make the most of their opportunities and the resources available to them, and who are likely to continue to do so throughout their lives.”

Even though we look at each new day as it is Day 1, we have developed over time a wealth of experiences and material. This knowledge that we have learned a lot on our journey makes us even stronger and better prepared to enter each new experience with an open mind. Bezos calls this being robust but also nimble.

Bezos talks about his role in Amazon as being a long term thinker. He doesn't want to be drawn into the present, rather he wants to be thinking three years into the future. He wants to be the person in the company that looks around corners. As a teacher, I see this as being able to see the whole picture: knowing how different individual subjects and lessons fit into the whole curriculum and syllabus. It's easier for us to learn if we and our students see the connections between different ideas.

The fourth principle is to write and to read and to appreciate the value of low tech – not using a screen. In meetings, Bezos prohibits a participant to use power point or bullets points. He demands full sentences and thoughtful prose. He provides time in meetings for the participants to read quietly the memo that has been written. It's like a study hall. Thoughtfully written prose are thoughtfully read. In general, time without technology can clear time for thinking, writing, reading and discussing.

Finally, we should be appreciative of the things we have, and especially the people that have helped us on our journey. Bezos talks about winning the lottery. It's a nice way to end this essay by pausing to give thanks for those who have helped us make us who we are.

Final notes: Bezos suggests 8 hours of sleep. With a sufficient amount of sleep you can more quickly and efficiently accomplish tasks. He even says you don't need to complete a lot of tasks. It's the quality of the tasks that is important.

Time is of the utmost importance. As a mentor for other teachers, I try to find ways to help them improve as teachers without them having to spend an inordinate amount of time preparing for classes.

I like this quote from Warren Buffet: "The difference between successful people and really successful people is that really successful people say no to almost everything." Buffet is telling us to simplify our lives and focus on what really matters to us.

"When I was a child, my mother said to me, 'If you become a soldier, you'll be a general. If you become a monk, you'll end up as the pope!' Instead, I became a painter and wound up as Picasso."