SHIGERU So I developed the MOOC *Visualizing Japan,* which is an MITx HarvardX joint project withMIYAGAWA: John Dower of MIT, Annie Gordon of Harvard, and also Gennifer Weisenfeld of Duke.

I incorporated the MOOC material into my residential class in 2014, and it changed everything. It changed literally everything. And I continued to use it right up until my last offering, which was fall of 2016.

Before 2014, it was a very traditional class with lectures, PowerPoints, and a little bit of student discussion. When I incorporated the MOOC material in 2014, I didn't anticipate any major changes. I simply said, why don't you look at these video lectures we just produced and see what you think, and think about them?

And what I realized right away was that students would come into class, and they would have a lot of knowledge, which was not the case before. So I would ask, so when did Perry come to Japan? 1853. When did Meiji era begin? 1868. Why did it begin? Blah, blah. So, my goodness.

I had a whole set of PowerPoints which I had created from years of teaching. I did not show a single PowerPoint. For 70 minutes, I just asked them questions, just to see if I can find something that they didn't know. They knew the whole thing. And I said, gee, this is different.

And without realizing it-- I didn't even know what a flipped class was-- I just did a flipped class. I did not lecture for a single minute. It was just question, answer, discussion, posing deeper questions for students to discuss. And I was absolutely, absolutely stunned that just in this one class, the way I teach changed fundamentally.

So by having flipped the class, one big concrete thing that came out of it-- this is MIT. So one of the students was actually getting some data on this. So there were a couple times when I had a traditional lecture class, because I had to do something. And this student timed me. And she found that I was speaking 80%, students 20%, which for a traditional lecture class, that's not bad.

And then so she told me that. And I said, well, look. Why don't you do the same thing when we do the discussion? So she did that, and she found that it was 50-50. And qualitatively, it's just completely different, completely different.

I remember we had a bunch of visitors from Japan the second week of the class. And I was

doing the interactive style. And they came up to me and said, so how many months have you been teaching this class? I said, two weeks. They are like, it's quite remarkable. I mean, just the sheer amount of knowledge the students gain from this new way of teaching you cannot compare to the previous.

We like to lecture. We all like to lecture. And I miss lecturing. A lot of faculty members who flip class tell me this. In their quiet moment in the corner of their room, they whisper, I miss lecturing. But we all know that this flipping class makes it so much more effective.

What's really important is to have good material for students to study ahead of class, and I strongly recommend video. Video is a very rich source of knowledge. And if you combine that with reading, you'll be amazed at how much students bring into class.

And as one of my colleagues, Rhonda Gibson, who has flipped her materials class has said, the reason why flipped class is so effective is the students touch the same material several times. Once when they viewing it before coming to class, and second time when we're discussing it, and third time when they do a piece that's based on it. That's why it's so effective. Yeah. I think lecturing is going to go the wayside of blackboards.