

I am so honored to be here and to be a part of this important and long-awaited day! Today is a time to celebrate your accomplishments, to recognize all that you've learned and all that you've done. But, I do have some news for you as well and that is that you are not, actually, done! Not even close. You have a new job to do, one that I'll tell you about today – something that is going to draw on everything you've learned.

If you're sitting here today, you've been a successful student, and as a successful student, you might think that you've seen all there is to see of what we do here at NAU. But behind all those classes, tests, and BBLearn shells, there is a world of activity that you might not have considered - a universe of dedicated people who are creating what you have come to know as an NAU education. Behind the scenes, we discuss, we debate, we read the research and sometimes we publish research of our own.

And today, I want to draw the curtain back on all that you may not have seen in your time here, to invite you to join me, and the rest of your NAU faculty, in thinking about how learning is created, what our role in that is going to be, and why that is so incredibly important to all of our futures.

Because you see, NAU is not just a place that gives degrees. It's also a contributor in a critical worldwide debate that's going on right now: the debate about how learning and education are changing and what they are going to look like in years to come.

So how are they changing? If there is one theme to sum it all up, it is the breakdown of boundaries. Lines around traditional concepts are blurring, they're eroding and sometimes they are just vanishing.

Lines are eroding between what we think of as "serious learning" and the rest of the popular culture, with people going online to share things like TED talks, documentaries, and infographics. They're sharing for fun – but also to learn, and to engage in serious discussions.

There's the line between so-called "traditional" and "non-traditional" students. More and more people are taking alternate paths to learning – they're coming back to education after raising families, changing careers, serving in the military and more – so in a way, non-traditional is the new traditional.

And our own President Cheng, as you know by now, is a great example of this. She went to 5 different institutions to attain the bachelor's degree, and many of you have similar stories of change, persistence and adaptation. And that is now how education works.

But most importantly for why we are here today, we see a breakdown between what we think of as "being in school" and "real life." Today, we have to think of school differently - not as a place you go to get ready to do the real thing in the real world someday, but as something you do whenever you need or want to.

And successful people have always known this: that education is something that happens your whole life, not something you finish one day. You've probably heard that for you to be successful in today's world, you have to be a lifelong learner.

And that is definitely true. But today, I want to pose to you another idea, one you probably haven't heard before. And that is that we need to be lifelong teachers.

We need to be lifelong teachers. When I say this, I mean that the future will belong to people with the ability to create understanding, to create meaning, and who have a passion for conveying that to others. These are the people whose skills will be sought out, and whose ideas are going to prevail.

This is going to be true in workplaces, where companies need employees who can lead others in adapting and innovating. It will be especially true in companies that market to consumers – consumers who, these days, are not interested in sitting through endless ads with catchy jingles but who really want to be educated about what they are buying. It is going to be up to you to do this. And that's teaching.

It will be true for those of you who become entrepreneurs, or others who work for yourselves. You'll need to pitch your ideas to clients in ways that are memorable and compelling. And that's teaching.

This is also going to be very true in our communities. With new ways of communicating, the world of public discourse has flattened out. More people get a voice, but for your voice to be heard in this increasingly noisy world, you have to inform and inspire the people you are talking to. That's teaching.

This is going to be true of our personal success. For those of you who are parents, or will be in the future, you will be the first and most important teacher of your children. And for yourself, to be successful, you will need to be adaptable, to grow in and even change entirely your career and life path.

For people who are willing to change, and willing to learn, there are worlds of new options to take advantage of. But increasingly, this learning is less about finding somebody to feed you information. Instead, it's about creating your own learning path, drawing on everything from online courses to mentors that you seek out. And to do that, you have to be able to manage your own work, keep yourself moving forward, identify what you do and don't know. You are now your own teacher, and a lot will be riding on your ability to teach yourself well.

So you need to be a lifelong teacher. We all do. Fortunately, you came to the right place.

NAU, as you might know, started out in the 1800s as a teacher's college. Even though a century later we've grown beyond just doing teacher training, that core mission and value - of inspiring our students to share what they know with the whole world - that still runs very deep in all that we do.

And we have gotten pretty good at it! You know by now that we NAU teachers are all about engaged active learning, to the point where you may be a little concerned right now that I'm going to ask you to all break into small discussion groups, and report out on a topic (don't worry, I won't do that to you today)!

One of the things that makes us so good at this is engaging with research on how human beings learn - and that is something that I'm particularly passionate about. I've studied psychology since I was nineteen years old, and what's kept me excited and engaged in this field all this time is that question of how the human mind takes in and uses information, and how our minds grow and change as a function of our experience.

We now know an astonishing amount about how these processes work in the mind, and in the brain, and we're to the point in our science where we can turn that into good, practical advice for people who are lifelong teachers.

So what is this advice? To start, it helps to think about what learning is not. Learning involves your memory, sure, but it isn't about just dumping information into a big storage system. Learning is also not just a function of repetition. Especially if we're just passively skimming over information, we can repeat it hundreds of times and never really get it. If you've ever been a student in one of my classes, you know I ask you to do a kind of annoying thing - draw a penny from memory. You can't do it! Nobody can, because although they've seen it many times, they've never really paid much attention to it - and that's the point.

Learning is about quality practice. When the learner gets involved and puts some effort into the process - magic happens. Good teachers don't just put information in front of people - they challenge them to remember it for themselves, and they create space for learners to put in the effort.

Research also tells us that learning and memory are intertwined throughout the mind - they are not just one single structure or spot in the brain. Researchers today no longer think of memory just as a place to keep information. Instead, we think of it as an adaptation, something that helps us survive in the world and accomplish our goals. So we remember best when the information directly ties to something we are doing. Good teachers reach students through student's own goals - what they want to do with the material they are learning.

Learning is also intimately tied up with the body and with our senses. The brain loves concrete, sensory details, and so memories thrive when we can connect them to images, sounds and feelings. Great teachers take what they are teaching and they make it real.

Lastly, learning is about reaching the learner's heart. We know that just as the brain doesn't like to absorb information passively, it also won't retain things that don't matter. The brain is built for ruthless efficiency more than anything else, and things that don't matter are just a waste of space. But, things that do matter? Those can stick in an instant and they can stick for a lifetime. We make things matter when we connect them to our emotions, our values, when we understand and care about them. And this is perhaps the most important thing that all great teachers know.

So now you know: After today, your job is to be a lifelong teacher. And you probably have a bigger start on this than you realize. Looking back on my own career, I can't pinpoint the day I made the transition from student to teacher. It certainly wasn't the first day I stood in front of a classroom where I was the official instructor! If anything, it really started the day I had to give a class presentation and realized that instead of being miserable and terrified, I was actually kind of excited.

And this is the kind of thing that many of you have experienced here. As you've come up through the ranks as an NAU student, you've had more and more times when you've been the one leading the way for your peers. Sometimes this happens without you even realizing it, in class discussions, research presentations, study groups where you're doing the explaining.

Others of you have had formal experiences with this. Many of you have served as peer coaches, supplemental instruction leaders, faculty research assistants or Peer TAs. In fact, raise your hand and give a shout out if you've done any of these. {Add your wave if you've ever been in a class that involved someone in that role, or experienced these resources in any way.} That's a lot of you!

So that's yet another dissolving boundary – between being the one teaching and being the one learning. If you've come to NAU, you've experienced this, and you know how powerful it is.

Being a lifelong teacher. I'm glad you have a good start on it, because we need you. Today, human societies are embarking on something we've never tried before – educating more people to a higher level than we have ever done. More people in this world are getting to learn, and they are getting to do so in more times and places and in more ways than ever before. This is a great thing!

But spreading learning everywhere is huge job, and one we cannot afford to put off. As a lifelong teacher, I have come to know in my heart that educated people are less violent, less prone to exclusion, prejudice, and conflict – all of the things that make our world such a hard place to share. By taking on this task of educating one another, we have the opportunity to change the course of human history. And that will be the secret to us all surviving and thriving together.

And I'll let you in on another secret. Teaching is fun. Ask anyone who does it for a living: Teaching is exhilarating. Teaching makes you smarter. Teaching is a way to actually see the world through someone else's eyes. Once you get started, you will never want to stop. And you don't have to!

So with that, welcome. Welcome to *my* side of the classroom. I'm glad you're here.