

Geraldine Richmond

KSU Graduate School Commencement Address – May 12, 2017

I am deeply honored to receive this honorary degree. It was here at Kansas State University that I developed my love for science that has withstood the test of time and many challenges over all these many years.

I must admit that when I was an early undergraduate at K-State I really had no idea where a science career would take me or that it would someday lead to me standing up here speaking to all of you.

Words cannot express how grateful I am to the faculty - both in and outside of the sciences - that launched me down this path.

You provided me the opportunity to do research in your laboratories, you opened doors for me into rooms that I never knew existed, you motivated me to stretch beyond my reach, you warned me of bumps down the road, and you instilled in me the love of teaching science that has been more rewarding than I ever could have imagined. Thank you.

But now let me turn to you. Because today is YOUR day.
Your D-day.

Those of us that are older recall the other D-day as the day the Allied forces invaded France in WWII.

According to Webster's dictionary, the definition of D-day is now defined more broadly as

“a day on which something important is planned or expected to happen”

For this graduation day, I think D-day stands for Degree Day – and the day that all your friends and families invade the KSU campus for this celebratory event.

Today is your launch, one filled with sadness for those you may not see for many years, exhaustion from all the hard work it took to get here, and wonder as to whether it was all worth it.

I can say with confidence that, it was all worth it in many ways. The degree opens doors and opportunities for you that at this point you cannot anticipate. But they will be there.

And often you must play a role in nudging that door open and creating opportunities.

So like nearly ever person that you meet today who offers you advice, I too will join the choir with a five parcels of advice – things that I wish I had fully appreciated and embraced at your career stage.

And things that I have tried to pass on to the many undergraduate and graduate students that I have had the privilege of working with over these past 35 years.

NUMBER !: Be willing to take risks.

Now as a mother myself, I don't mean jumping on a Harley and riding 120 mph down the back Kansas roads.

I do however mean doing things in your career that take you outside of your comfort zone.

View your life and career as a well-balanced financial portfolio that is comprised of low risk, medium risk and high risk investments.

Things that you are really good at and love to do are low risk. The probability of success is high.

Medium risk activities build on your strengths while taking you in new directions as you broaden your skills, networks and ambitions.

The high risk ventures are the ones that truly take you out of your comfort zone, that challenge your personal paradigms, that have unpredictable outcomes.

You enter them with the recognition that although the venture may have a low probability of success, if you succeed, the achievement will be of high impact, will be extraordinarily satisfying and will significantly bolster your self confidence and self esteem.

This is not the territory for perfectionists as the probability for failure can be high. If all that you propose to do works as you had predicted, then you are not really learning anything new. Some of our best discoveries in my laboratory did not come from what I hoped we would find, but what I did not anticipate finding.

NUMBER 2: Viva la Difference!

Embrace diversity in your life and in your work. The best ideas come from a diversity of sources and problem solving experiences. That has been proven many times over.

Take the case of the initial airbags developed for cars. These airbags that were largely designed by male engineers, when put into practice, killed and injured small children and women because of a force that was largely designed to protect the large male body.

Voice recognition technology promises to make our lives easier, letting us control everything from our phones to cars to home appliances. However, even today, speech recognition has struggled to recognize female voices.

When the auto industry began implementing voice commands in more vehicles, these cars were far less responsive to the female voice than that of the male voice. The same is true for those with accents and African American voices.

Why? Because the voice data sets that engineers have used to develop the voice recognition algorithms have come largely from a small subset of voices in the development laboratory and lack the breadth of voices of our society. You would think this would be obvious but not if you or team has a narrow perspective of the market.

Although I do not believe that there is such thing as “male science”, “female science” or “African science” or “Latino science”, we all bring different perspectives to a problem because of who we are and our experiences.

I still remember with laughter the day when I first learned about pulleys in my Engineering Physics class here on this campus. I was so fascinated by pulleys but had never had one or worked with one before. So when I went home to do the problem set, I did the obvious to construct my own pulley. I opened my jewelry box, took out a round copper bracelet and strung a necklace around it to emulate a pulley. It worked - and I got a A on that exam. The result was right but my approach was likely quite different than that of the several hundred guys in my class.

NUMBER 3: UP your game

When making an important decision in your life, whether that be a job change or taking on any new venture, never make that decision when you are tired, angry or over worked.

Your brain needs to be fully functioning to make such decisions and exhaustion and anger diminishes your ability to think clearly and with full brain capacity.

And most important - never make a decision when your self esteem is at a low point – make it when you are at the top of your game. Make decisions based on your strengths and not when you brain is playing a silly game of obsessing over your weaknesses that may even be irrelevant.

NUMBER 4: Noone makes it alone in this world.

You are here today because of so many people that have helped you along the way – from the teacher that inspired you in the early years, to the friends who never gave up on you - even when you embarrassed them beyond belief, to the neighbor that always had a smile and hello.

Thank them, hug them and return the favor to others.

It's good for them and equally good for you.

The act of giving is known to stimulate the reward center in the brain – releasing endorphins and creating what is know as the “helper’s high”. And like other highs, this one is addictive.

And finally,

NUMBER 5: Have the courage of your convictions –

summed up beautifully in a poem of Edgar Guest in 1934 called:

It Couldn't be Done (with my slight modification)

Somebody said that it couldn't be done,
But she with a chuckle replied
That “maybe it couldn't,” but she would be one
Who wouldn't say so till she'd tried.
So she buckled right in with the trace of a grin
On her face. If she worried she hid it.
She started to sing as she tackled the thing
That couldn't be done, and she did it.

Somebody scoffed: “Oh, you'll never do that;
At least no one ever has done it”;

But he took off his coat and he took off his hat,
And the first thing we knew he'd begun it.
With a lift of his chin and a bit of a grin,
Without any doubting or quiddit,
He started to sing as he tackled the thing
That couldn't be done, and he did it.

There are thousands to tell you it cannot be done,
There are thousands to prophesy failure;
There are thousands to point out to you one by one,
The dangers that wait to assail you.
But just buckle in with a bit of a grin,
Just take off your coat and go to it;
Just start in to sing as you tackle the thing
That "cannot be done," and you'll do it.

Thank you! And best wishes to you, your family and all those who
celebrate with you.