Oklahoma State University
ConocoPhillips Lectureship in Engineering Education

Open the Front Door, Close the Back Door:
The Impact of Culture on Recruiting and Retention

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September 5, 2018

It's an honor to be here today and to speak as part of this distinguished lecture series. While preparing, I made the mistake of looking back at the previous honorees and reading some of their lecture transcripts, including two appearances by my teaching mentor and hero, Rich Felder. It wasn't long before I had a serious case of imposter syndrome. However, I reminded myself that you have invited a wide range of educators who each had a unique voice to share, and I hope that our time together today will provide you with some unique food for thought.

Before I begin, I'd like to take a moment to thank Dr. Russ Rhinehart, your retired department head, who is here today. When I was a sophomore in Chemical Engineering at NC State, Russ was my TA for the introductory material and energy balance course during the summer of 1983. The course was really hard for me – I struggled and wondered if I had chosen the right major. However, Russ was always encouraging and supportive. He patiently answered my questions and was there to greet me with a smile during office hours. Even after the class ended and in later years, he would see me in the hall and encourage me to persevere. We kept in touch over the years and saw each other at AIChE annual meetings as my path led to graduate school at Carnegie Mellon and then to Eastman Chemical Company. Years later, when I was considering a return to academia in a teaching-focused position, I reached out again to Russ, who was then a department head, to seek his advice. Once again, Russ urged me to pursue the opportunity and reminded me how much I had to offer as a returning industrial practitioner who could teach senior design and advise students. I never dreamed that one day I would be a co-author of the material and energy balance textbook in the course that gave me such a hard time. I'm grateful to Russ and want to publicly thank him for being a cheerleader for me during times of uncertainty and doubt. I didn't realize it at the time, but Russ' influence helped shape the *culture* of my undergraduate experience.

So let's dive into this topic of culture. It's not something that we as engineers usually talk about, and you may never have thought much about it, although I guarantee that you have been affected by it. During our time together today, I will define culture and describe different responses to it, I'll discuss the impact of positive and negative cultures, and I'll spend most of our time talking about how to assess and impact your own culture.

Let's start our conversation by thinking of a group that you belong to. This could be Oklahoma State….the chemical engineering department…your research group…your faculty colleagues…a volunteer or social organization…a sports team…or even your own family. Think about what you'd say to someone who asked you about this group, or what others outside the group might say about it.   Take a moment to jot down a description of your group's culture in five words or less.

For this discussion, let's define **culture** as "*the relationships, interactions, and activities involving all the stakeholders in an organization*."   Think about the group that you have identified.   Spend a moment thinking about the relationships between the members of the group…the ways in which members interact…and the activities that take place within the group. Those elements form the foundation of what we call culture.

Individuals typically have one of three responses to their culture:

- **Fit**: They feel comfortable and supported in the culture. They feel capable and empowered.
- **Fight**: The culture is not a good fit, but they stay anyway and "fight" to find their place or actively resist the influence of the culture.
- **Flight**: The culture is not a good fit, and they choose to leave.

A healthy culture is characterized by collegiality and cooperation. Members enjoy interacting in informal settings. It's easy to attract and retain high quality members – people can't wait to be part of this group. Members experience productivity, creativity, and energy. Conversely, you know a "toxic culture" when you see it, too. It's characterized by personal and professional conflict – there's always some kind of drama! Members engage in excessive and unhealthy competition, or perhaps they just withdraw in response. It's difficult to attract and keep members, and members dread showing up. Members spend a lot of time at the water cooler or coffee pot talking about how bad things are. Obviously, these are two extremes – most cultures fall somewhere in the middle, or they might be healthy in some areas and unhealthy in others.

Why should you care about culture? It has a tangible impact on the bottom line. The Gallup-Perdue Index Report[1] did a study of employees who were engaged in their work – in other words, they were doing something they are good at, something they like, at a company where people cared about their work. These engaged employees also have improved outcomes in absenteeism, productivity, profit, safety, and turnover. Safety? Profit? Now you're talking! So

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[1] *Great Jobs, Great Lives: The Gallup-Purdue Index Report,* 2014, n.d. Web. 9 January 2017, <http://www.gallup.com/reports/197141/gallup-purdue-index-report-2014.aspx>

culture isn't just about "making people happy" – it's creating an environment which results in positive outcomes.

Keep in mind that adding a new team member (and conversely, losing a team member) costs money. The Department of Labor estimates that there's 1.7 – 2.7 salary multiplier to account for benefits, training, and the productivity lag that comes with the new member's learning curve. So that new chemical engineer hired at $75,000 has a real cost of $127,500 - $202,500. For new assistant professors, consider the investment of time and money after several years when it's time to evaluate their tenure status. If you bring someone into the group, you have a strong financial incentive to keep them, so it's worth being intentional about culture.

I encourage my students who are interviewing to pay attention to clues about the culture, since that will likely influence much of their experience there. As you look at different companies and graduate schools, consider the culture in addition to salary, location, and job title. It can be challenging to gauge the culture during a brief interview, but questions like "what do you like most about working here?" and "what's one thing you could change if you could?" might yield unexpected insights.

It's important to remember that you are always sending messages about the culture of your group. Every relationship, interaction, and activity (or lack thereof) sends a message…positive or negative. This starts from the application/interview…to communication prior to joining the first day and the first month…and on-going.

Most of the existing literature in the area of academic culture relates to business school or medical school. However, it's clear that fitting into organizational culture is linked to member satisfaction. Certain episodes can be mapped to a member's increase or decrease in organizational identification.[2] For example, receiving informal recognition or socializing with other students and faculty results in an increase in organizational identification (think of this as a big "thumbs up"). Likewise, feeling alienated or having a negative interaction with an advisor or other students results in a decrease in organizational identification ("thumbs down"). It's no surprise, then, that *retention is related more to culture than grades or salary*. More good performers may leave because of a "lack of belonging" than because they can't perform. Moreover, the students (and faculty) who are leaving may be the diverse voices that we're trying so hard to recruit and retain.

It's important to recognize that with every interaction, you're making deposits – or withdrawals – to that group member's emotional bank account. If you've got a large enough balance, then making a deduction occasionally won't "break the bank". However, if you're already "in the red", then there's nothing there to draw on. How do we know what members need? Sometimes we might be surprised. Faculty and freshmen students were surveyed on "*what*

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[2] C. Bullis and B. Bach, "Socialization Turning Points: An Examination of Change in Organizational Identification", *Western Journal of Speech Communication*, **53,** 273 (1989).

issues the freshmen thought were important." The faculty response: choosing a major, finding an internship, securing a co-op. The freshman response: sleep, feeling safe, homesickness, relationships, food.[3] Note that the faculty's list reflects what faculty *assumed* were important to students in their departments. Those are important things…but probably not to first semester freshmen. Sometimes there may be a disconnect between what faculty think students need and what students are truly concerned about. When in doubt – ask!

The same is true with employees. Typically new employees are not thinking about retirement and promotion as much as "who should I eat lunch with?", "what should I wear?", "who is there to hang out with?", and "how can I find a dentist?" I spoke to some recent alums a few years out of college. Here's what they said:

- *People stay because they enjoy the environment and the people they work with.*
- *Make it easy to plug into the community and find people who have similar interests.*
- *All you need in a new town is a place to work, a place to live, a place to work out, a place to go to church, and some friends to hang out with.*

Remember, having a healthy culture is not just about making members feel happy. It doesn't necessarily have to cost more, but instead focus on helping new members make connections to the group, to other members, and to the community. It's not about lowering standards of performance, such as the rigor in a department or results in a company. In fact, the expectation is that performance should *increase* as a result of a healthy culture.

So for students who may be interviewing, here are some things to look for and some questions you might ask to give you a clue into a company's or a graduate school's culture. For faculty, how are you and your department doing in these areas?

- **New faculty/student process and first day/semester:** What do new members of the group experience on their first day/during their first semester? As an example, my daughter Meredith had a summer internship at a small civil engineering consulting firm. On her first day, no one asked her to lunch; one of her co-workers went home for lunch every day, others seemed to have an established "lunch bunch", and others just disappeared at lunch to run errands. That whole summer, she was only included in one or two group lunches. As the only student intern there that summer, and the only female engineer, her first impression about the community (or lack thereof) that existed at the firm for new employees was not a positive one.
- **Mentoring**: Be sure to assign one, and encourage new faculty and students to seek out other informal mentors – both peers and those above them. I encourage our students to build an ever growing and diverse "board of directors" for professional and life decisions.

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[3] D. Budny, A. Allen and J. Quarcoo, "What Do Our Students Think is Important During Freshman Year?" Proceedings of the 2007 ASEE Annual Conference & Exposition, ASEE (2007).

- **Connecting with departmental leaders:** Are there opportunities to connect with departmental leaders, be they students or faculty? This could be formal or informal social gatherings, lunch with the department head/dean sessions, or other mechanisms to allow new members to connect with leaders in the group. This is a great way for leaders to share their vision for the group and solicit input.
- **New faculty/student organizations and networks:** Are there groups to allow new students/new faculty to connect with one another?
- **Communication (especially on-line):** How is important information distributed? How do members find out about important events or useful resources?
- **Alumni groups**: This applies more for an academic setting but could also involve retirees of the organization. Alumni can be a powerful influence and resource for an organization if you can keep them engaged.
- **Traditions**: Traditions bind members of the group with positive shared memories. In Carnegie Mellon's graduate student lounge, students who defend their PhD "sign the wall" with their name and defense date, and younger grad students plot for years to choose their space on the wall. (When the lounge was recently repainted, they had to take photographs of the wall and then go back and duplicate the signatures). In my material and energy balance course, we call students who make 100 on the exam to congratulate them on their success. Graduating seniors who have overcome adversity and demonstrated perseverance receive the Jimmy V (Jim Valvano) Award. One of my colleagues presents each new PhD from his group with framed "academic family tree" of their research lineage. In some departments graduating seniors deliver a skit at the senior banquet spoofing their professors. Group members cherish these traditions and have fond memories of the shared experience.
- **How do you treat your wounded?** How do you treat people who are struggling academically or professionally? Those who are struggling personally? Is there a safety net? Is anyone paying attention? Given the increasing incidence of mental health issues among both undergraduate and graduate students, this is a critical challenge. While faculty are not typically trained counselors, we are on the front lines in the classroom and during office hours to notice if students are struggling and to help direct them to campus resources.

Think back to that organization you identified at the beginning of the talk. Spend a moment and jot down some notes related to these questions:

- What activities are important in your group's culture?
- What traditions are important in your group's culture?
- What processes are in place to build and nurture relationships and connections between members of your group?
- How do you impact the perspectives and priorities of both new members and more senior members?
- How do you encourage collegiality and collaboration among members?

I hope that I've persuaded you today that everyone affects the organization's culture. The Department Head, CEO, HR manager, or Undergraduate/Graduate Director cannot be a one-person show. "One bad apple" applies here – but fortunately, it's also true that one caring individual can also make a tremendous difference in the life of an individual through an encouraging and affirming word or act. As I mentioned in my opening remarks, I have reflected on Russ Rhinehart's influence on my own career and wonder how my path might have been altered had we not crossed paths, and the same is true with other influential mentors and colleagues.

I hope that I've persuaded you today to consider the positive impact of a healthy culture and the consequences of a toxic culture. Note that culture change is a slow process – it is not a quick fix. The culture took a while to build, and it will take a while to change, although a leadership change can signal a change in culture. Fortunately, in academia, you get new students each year, so you always have another chance to start afresh!

I hope that I've persuaded you today that every interaction sends a message, positive or negative, about the culture. You are constantly making either deposits or withdrawals into the bank accounts of your members. Motive matters: actions must be genuine, not manipulative. You must be authentic -- people can spot a fake and no one likes to be manipulated. The teacher who brings in pizza on the class evaluation day can't make up for a semester's inattention.

In conclusion, *be intentional about defining your desired culture and reinforcing it*.

I hope that I've given you some food for thought and that this might be the start of conversations in the faculty and/or student lounge around this topic in the weeks to come.

What's one thing you learned from this presentation that you'd like to implement in your own research group or look for in a potential company or graduate program? Turn and share it with your neighbor.