

Faculty Development Plan

"I am a great believer in luck, and I find the harder I work, the more I have of it."
– Thomas Jefferson


August 15, 2022

One year down. I've boiled my experience as a professor into one word, "expectation." From personal expectations to university expectations (communicated during the Spring Seminar), I want to use this document as a framework to organize my approach to take incremental steps to reach those personal and professional expectations. Sections are divided by the three critical components outlined by the university: Citizenship, Teaching, and Scholarship. Each section will be divided into the following subsections: my strengths, my weaknesses, resources to improve on one or two of those weaknesses, and a set of measurable goals I will pursue this year to align my needle with who and what I want to become as a servant of the Lord in a choice part of His vineyard.

Citizenship

Strengths in citizenship. I enjoy professional interactions. Whether personal or professional relationships within the college, I believe that I have a solid capacity to develop lasting friendships with others. Furthermore, as expected by the university and college, I am willing to participate in committees as recommended by the chair. An additional strength is my enthusiasm within the classroom. I believe I bring a strong positive attitude to each class that I can translate into a more inclusive atmosphere.

Weaknesses in citizenship. I enjoy remote participation in university events. This propensity to the comforts of my office can prevent me from building divinely guided interactions with students and faculty, especially at university devotionals and forums. An additional weakness is my lack of connection to the science community in Utah County. While I regularly participate in international consortia, I'm unaware of the research needs in Utah.

Short-term goals for citizenship. Using my strengths and weaknesses outlined above, I have three goals that I hope will develop into habits that will provide proof of positive citizenship for my 3rd and 6th-year reviews. These goals hope to address the following question. What can I do to show through actions that I'm committed to the principles of BYU? How can I strengthen my relationships with my colleagues? And how can I be more inclusive in the classroom?

- 1) I will attend, in person, all possible BYU Devotionals and Forums and will communicate to my students where I plan to sit and encourage them to join me.
- 2) I will invite all of the bioinformatics-centric professors, students in my lab, and one other college faculty to my home for dinner each year. Breaking bread with those we love and interact with establishes meaningful memories and moments that I hope will bloom into lasting friendships and enhance unity within the college.
- 3) I will always ask a female student to answer/participate in every class's first question or activity. During the Spring Seminar Series, I attended a lecture on improving female engagement in the classroom. They showed that calling on female students first will significantly improve female participation throughout the class while maintaining male involvement. I hope to find this technique especially helpful in my STEM field.

Long-term goals for citizenship. In hopes that all of my short-term goals become long-term habits, I want to become a BYU professor that is recognized as an engaged member of the community and not just in my class, ward, lab, and family. While I will strive excel in those four spheres of influence, I also want to become a trusted science and university advocate on the local and national scale. The following questions will drive my long-term goals. What incremental steps can I make now to be more connected to the science community in Utah, the United States, and the world? And who/how can I team up with to progress healthcare initiatives? Who are role models within the community, and how did they get there? My hope in addressing these questions will help me identify novel avenues of research and citizenship.

- 1) Spend five days during the fall and winter semesters researching science and business leaders in the community who are committed to improving healthcare through data, science, and genomics. Once I've explored my connections to who I've researched, I will try to get a meeting with one of the folks to explore and offer my support to their cause (as it aligns with BYU objectives). This effort will keep me up-to-date

with technologies, businesses, and strategists that I can use to place undergraduate students into meaningful employment. Additionally, by teaming up with local experts, I hope to pursue more significant projects that I could not accomplish alone.

2) Find and attend one local business networking event a quarter. By participating in these events, I hope to provide additional links to the university and its talented students.

3) Find and offer my services to communicate science to the local public scene. I remember as a student of Keoni Kauwe's that he shared his work at the Orem Public Library. I want to start to offer my services/knowledge to other public institutions within the community.

Relation to BYU. These goals relate to BYU's needs in many ways. First, they additional local connections will provide our students with opportunities to go forth to serve and work within the local communities to support their own families. Additionally, these connects reflect well on BYU's mission to bring good to world. It also aligns well with BYU standard to participate in weekly devotionals.

Resources needed. Time is truly the only resource needed.

Progress to goal. Being a new faculty member I haven't made much progress on these goals. I did help bring some speakers into an industry night that Dr. [REDACTED] put together, but I hope to spend some networking time outside of BYU directed activities.

Teaching

Strengths in teaching. I took the reviews of my first semester harder than I anticipated. But from the reviews, I was very encouraged by the feedback, and potential the students saw in me. Two significant highlights from those reviews were that the students could feel my enthusiasm for the material and my care for them. I would consider these two features as highlights of my teaching and two things that are difficult to teach and learn as a teacher.

Weaknesses in teaching. Despite expertise in some intangibles, I fell short in two critical features of any class. Student reviews criticized the course's lack of organization and structure, and these shortcomings led to a lack of clarity and confidence in the material. Furthermore, in attempts to get feedback on my teaching, I was not consistent in asking.

Short-term goals. From the feedback, I have designed a set of objectives geared toward improving the organization and implementation of the course. These short-term goals, in-line with communication with the Center for Teaching and Learning, will hopefully address the following questions I can implement for my Winter 2022 course. How can I better communicate and design a pinnacle project for the course? What resources can I use to make my teaching better? What steps can I take to improve the self-evaluation of my instruction?

1) Evaluate how each assignment prepares my students for the oral final at the end of the semester. I want to clearly state how each task prepares my students to embrace the uncomfortable parts of science.

2) I want to read and implement one suggestion from Heath and Heath's book, *The Power of Moments*. I'm unsure what I will find, but I hope it helps my teaching.

3) Pre-record 3 of my most difficult lectures. During my one-on-one meeting with the CTL, [REDACTED] suggested I give the students homework to record themselves giving a 3-minute presentation or answering a question. I want to try using this approach to improve my teaching.

Long-term goals. Long-term goals, in my mind, ought to center on becoming. I want to become an inspiring teacher, and I want to become the teacher that helps my students embrace uncomfortable learning. I want my

students to identify new strengths. In addition to the short-term goals, I want to take incremental steps to keep me in line with who I want to become.

1) I will apply for the \$300 class stipend to provide in-class moments. My department chair, [REDACTED] shared a story about his plant physiology class during the New Faculty Series. He opened the scriptures to Jesus's commandment to consider the lilies. He bought many lilies for his students and discovered beautiful church organizational principles in the structure of the lily (3 main features of the stigma surrounded by 12 anthers). I may use these funds to purchase lilies for the class. I also want to use these funds to involve community members willing to share their experiences with human disease. These funds will help pay for their local travel to campus.

2) I will read through "Make it stick" each year and try to glean and implement one principle to make my class more repetitive for improved learning.

3) Finally, I will experiment with various self-reflection exercises in class. These may include 5-min writing exercises, end-of-class reflections, or more sharing with neighbors. I hope these moments will help students identify their strengths and hopefully complement the strengths of others.

Relation to BYU. These goals relate to BYU's needs in many ways. First, they provide with challenging experiences within the safety of the university classroom. The experiences that are gained from providing meaningful feedback and presenting their science (goal 3) will provide our students with opportunities to share their new found strengths with collaborators and strengthen their faith in themselves as representatives of themselves and ultimately BYU.

Resources needed. I plan to use the CTL resources to check and validate ideas that I plan to implement. This will mostly be time from CTL representatives and time from me to implement.

Progress to goal. Being new I have not made substantial progress on these goals, but I have met one-on-one with CTL and look forward to their continued involvement in helping me shape and improve my genetics of human disease course. As for the Statistical course for biologists I am excited to learn from the organizational strength of Dr. [REDACTED].

Scholarship and research

Strengths in research. Some of my greatest strengths in research are networking in data visualizations. I also have an aptitude for finding exciting projects that are often too big for me to tackle alone. This combination of strengths has developed into a solid national and international set of researchers and projects. I am working with two large national consortia; the Patient Derived Xenograft network (PDXnet); and the Clinical Proteomics Tumor Analysis Consortium (CPTAC). Additionally, I maintain relationships with my former labs at Washington University in St. Louis and the Huntsman Cancer Institute. These four data sources and teams have provided my lab with sufficient resources to build and launch my lab.

Weaknesses in research. The most glaring feature of my research lab is that it is not externally funded. I have taken on a small army of undergraduate students now, and I need to land some funding to keep them paid and provide them with the experiences they need to succeed. However, when focusing on the aspects, I need to present them to my department for review. I want to build a strong case for establishing an "independent" lab. While I think there are many flaws in independence, there is wisdom in having a reputation on which I can contribute to outside collaborations. I'm still working on this "independence thing."

Short-term goals. Academically, I have four possible grant ideas to submit and three papers to finish. But I struggle to complete these projects because I tend to work and write slower than my colleagues. In addition to the distractions of worry, I must set aside dedicated writing and analysis time to complete these projects. I've attempted to re-orient my early mornings to write over the summer, and I've tried writing at night, but I haven't found time outside the day to write. So for this long and short-term goal, I want to keep it simple.

- 1) Set aside Monday, Wednesday, and Friday mornings (during work hours) for uninterrupted writing time. This goal, if executed, will translate into more complete projects, namely grants and paper.

Long-term goals. I want to build a reputation in my lab that those who join will have an opportunity to get internal university funding through CURA's or the Simmon's Center for Cancer Research, a poster presentation at a conference, and a paper. I want this to be the expectation of those who join my lab. I also must be in the habit of looking forward to making abstract deadlines and building a structure of success among the students who join. All in all, I want to provide students with a similar experience to the one I had while a bioinformatics student at BYU.

- 1) Read and implement the "Get Things Done" philosophy by David Allen.
- 2) To keep all of these activities straight, I will spend a little time each night and each week reviewing my "Get Things Done" lists.
- 3) I will do what I say I will do for students, collaborators, supervisors, and myself.

In conclusion, I have set a series of measurable short and long-term goals that will keep me oriented to a successful third and sixth-year review and successful tenure at BYU.

Relation to BYU. These goals align with BYU's requirements for the continuing faculty status based on the document that was provided to me where expectation include 9 publications in 6 years and strong attempts at external funding. By finding set writing times I will reach these expectations.

Resources needed. In reaching out to the chair in relations to a grant that I submitted this year, the department as provided \$17K to generate preliminary data necessary for the grant proposal for this November. In addition to these funds, I will need some financial resources to pay for student research assistants.

Progress to goal. Being new a new faculty and junior at that, the grants will take a bit more time to mature, but I received positive feedback from the IDR grant I submitted in February and I look forward working other faculty to submit grant this fall and I look forward to sending a few of my students to present their work at conferences this fall.