

Motivating Student Success by Adopting Lean in Higher Education

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BA 302 Term Paper

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Introduction

This paper will explore the common sources of struggle and motivation for students at Portland State University's School of Business. The information gathered and arguments made will be structured around the interviews of two School of Business employees, one being an administrator, and the other an adjunct faculty. The paper's goal is to analyze the situations that undergraduate business students are facing and to make recommendations to the school about how it could improve. In addition to the two interviews, the paper will utilize peer-reviewed articles of research on topics related to the interview findings.

Finally, the paper will outline recommendations for improvement to the school based on those findings, including how Lean Management principles, when applied to an educational institution, can aid the school in its efforts to provide better value to its main customers, the students, even with limited resources and reducing costs.

Overview of PSU School of Business Administration

Portland State University is an urban college in the heart of downtown Portland, Oregon, and is ranked by US News as one of the nation's best colleges (#230 nationally, and #32 in terms of innovation). The School of Business Administration is housed in the Karl Miller Center building and comprises graduate and undergraduate programs offering degrees in accounting, finance, marketing, management and leadership, human resources, and supply chain management, among others.

Due in part to its urban location Portland State is a commuter school, serving many underrepresented ethnicities, international students, and non-traditional students. Many of these students work part or full-time jobs while they attend, which often leads to an imbalance between academic and family responsibilities. These factors make obtaining a college education a significant challenge for many students, and sets Portland State apart from the other state funded universities in Oregon.

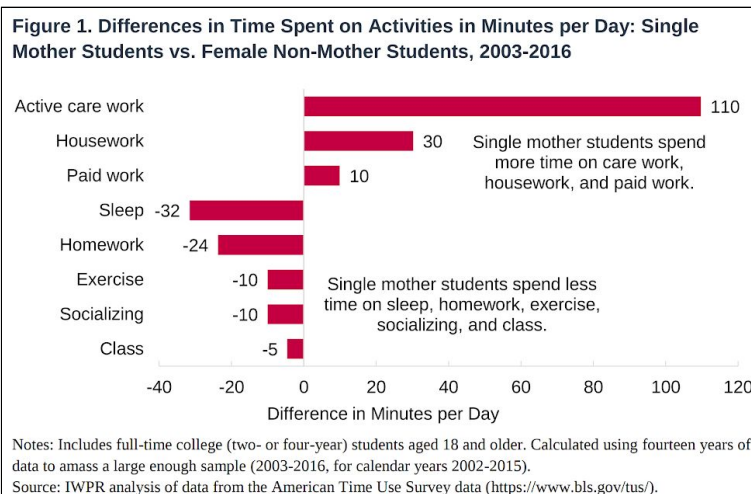
This paper analyzes student motivation based on interviews from two employees: one administrator of 15 years, and one adjunct faculty of three years. The paper then singles out the problems identified by these educators and presents a case for improvements that can lead to cost savings and an enhanced student experience using Lean methodologies to reduce waste. The research performed in preparation of this paper leads me to believe that this can even be accomplished without laying off or firing a single employee.

Findings

The interviews (see the Appendix for the full transcript) that were conducted to gather information for this paper converge on these key points regarding student motivation:

Many students at PSU are faced with the challenge of balancing academics with full-time work and family responsibilities.

This is a well-known problem on the PSU campus, and there are national studies explaining the issue. The May 2018 [Briefing Paper](#) by the Institute for Women's Policy



Research states, “Work and caregiving demands leave less time for single mothers to focus on coursework, threatening their academic success and potentially putting their financial aid eligibility at risk.” The chart above (taken from the same report) shows the difference in minutes per day of time, per activity, that single mother students spend vs. non-mother female students.

While Portland State does have resources available to students who struggle to meet their varied commitments, such as the Services for Students with Children (SSWC) program, and funds set aside to assist students who struggle monetarily, not all students are aware of these resources.

This challenge is compounded by repeated annual tuition hikes as the school faces state budget cuts.

There is no question that both direct and indirect costs of going to college are increasing each year: the cuts from state funding are made up for by raising tuition instead. Just days before the completion of this paper, PSU President Rahmat Shoureshi and other Oregon university presidents issued a joint statement [decrying the governor's proposed state budget](#) for 2019-21 which would significantly cut state support for academic and student support programs. This trend has prompted PSU to enact such measures as the [Four Years Free](#) and [Transfers Finish Free](#) programs. Yet these programs still leave behind critical segments of the PSU student population: returning/non-traditional, and part-time students who constitute [40.4% or more of the population](#), yet have [no formal system in place for financial assistance](#). Portland State has a large proportion of students who have previously been in and out of college as a result of rising costs over recent years, or who cannot make a full-time commitment due to circumstances that are often outside of their control.

Students who are intrinsically motivated find ways to apply what they learn outside of class. This may mean finding ways to apply learned knowledge at work, or using it to advance extracurricular activities.

This should come as no surprise, but it begs the question: why are relatively few students so motivated? I believe that this can be explained using two prominent theories of motivation: the need-based **ERG Theory**, and the process-based **Expectancy Theory**. These theories are explained in the textbook *Organizational Behavior: Bridging Science and Practice v3.0*:

ERG Theory

Basic human needs may be grouped under three categories... **Existence** corresponds to Maslow's physiological and safety needs, **relatedness** corresponds to social needs, and **growth** refers to Maslow's esteem and self-actualization.

Expectancy Theory

Expectancy theory argues that individual motivation to put forth more or less effort is determined by a rational calculation in which individuals evaluate their situation.

According to this theory, individuals ask themselves three questions...

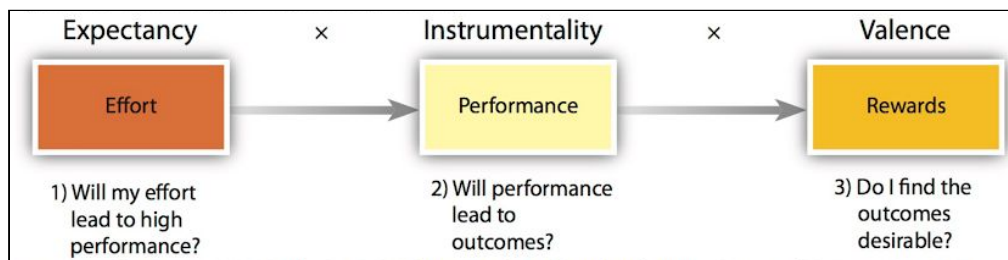


Figure 2: Summary of Expectancy Theory (*Organizational Behavior: Bridging Science and Practice v3.0*)

I am arguing that although students who participate in extracurricular clubs and projects are more desirable in the workforce (the argument for this is further fleshed out later in the paper), students often don't participate in these activities if they are frustrated in their efforts to satisfy their existential or relatedness needs (ERG theory), or if they don't believe that they will produce worthwhile or meaningful outcomes from these activities.

The faculty and administration at PSU are highly motivated to help the students but have limited time and resources to do so.

This is an important factor that is perhaps among the most difficult to resolve. According to PSU's self-reported [organizational profile](#), the student to faculty ratio is currently 18:1, which is better than the 20:1 profile of previous years. However, reducing that ratio further would require PSU to bring on more faculty, a prospect that requires significantly more funding than the university has access to without substantially raising tuition costs further or receiving a significant contribution from public partners.

PSU could improve upon the resources that it provides to its teaching staff.

An important point from the interview with the adjunct faculty is that, while she is aware of teaching resources that are provided on campus, she is not able to take advantage of those because of her primary job. Neither is she aware of any resources that can be accessed remotely. While it may be that PSU has these resources available, it stands out that an adjunct faculty of three years is unaware of those resources. Since PSU has a growing number of adjunct faculty teaching classes remotely or in the evenings after their primary jobs, the institution should prioritize remote access to those resources. I believe this is the easiest matter to resolve in this paper: require adjunct faculty to check in to an online portal which provides training resources. Due to the extensive work but limited space used for the rest of these topics, this one will not be addressed further in this paper.

Recommendations

This paper's recommendations will address these problems:

- 1. Students are struggling to balance the requirements of academics, work, and family. A major cause of this struggle is the cost of living combined with the cost of attendance.**
- 2. The imbalance contributes to lack of student involvement in extracurricular activities. Yet extracurricular activities are highly correlated to student success and job placement.**
- 3. PSU has limited time and resources to devote to helping individual students succeed in these areas.**

My recommendation to the School of Business and the University at large is to adopt Lean management in its operations, administration and curriculum planning. Substantial evidence shows that Lean has enabled universities to reduce costs and add value to student life. Research also indicates that these issues may be resolved without laying anyone off!

Adopting Lean methodologies will save the school money! The school can focus the freed resources on filling students' existential needs (ERG theory).

There is a precedent for this. Miami University in Oxford Ohio is the 10th oldest public university in the nation, and adopted a Lean initiative in 2009 during the financial crisis. Reeling from the after-effects of a \$30M budget cut, the school was considering strategies to maintain service levels with the reduced resources. The result is that in spite of the deep budget cuts, by 2014 the school was able to achieve [\\$19.8M in financial improvements](#). Miami University achieved this with NET IMPROVEMENTS in service quality and TO THE BENEFIT of the

school's green initiative! In other words, not only did it save the bottom line, it ultimately improved the quality of the school's operations.

Once the School of Business adopts these measures, cost savings can then be re-allocated to support the students who still struggle to balance academia with their lives. This is itself an important principle of Lean management: Add value to your organization by developing your people and partners (Liker, Jeffrey. *The Toyota Way*). This benefit of adopting Lean will not come instantly, but over the course of training faculty, staff, and students.

One suggestion on how to achieve this goal more quickly would be to adopt *Kaizen* (Japanese term for “continuous improvement”) teams consisting of faculty, staff, *and students*.

Drs. Jahan and Doggett of Western Kentucky University report that students surveyed at the end of a Lean Management course over the course of two years were highly opinionated about ways that the school could cut waste and add value to their

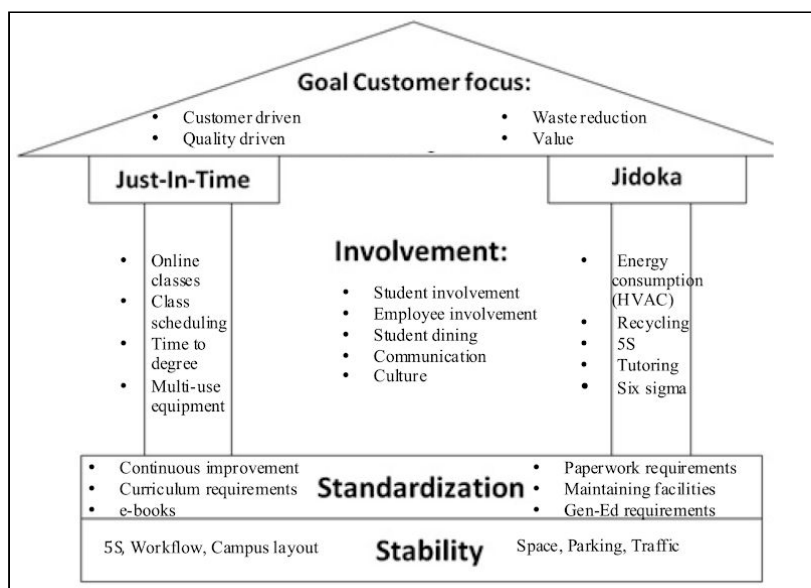
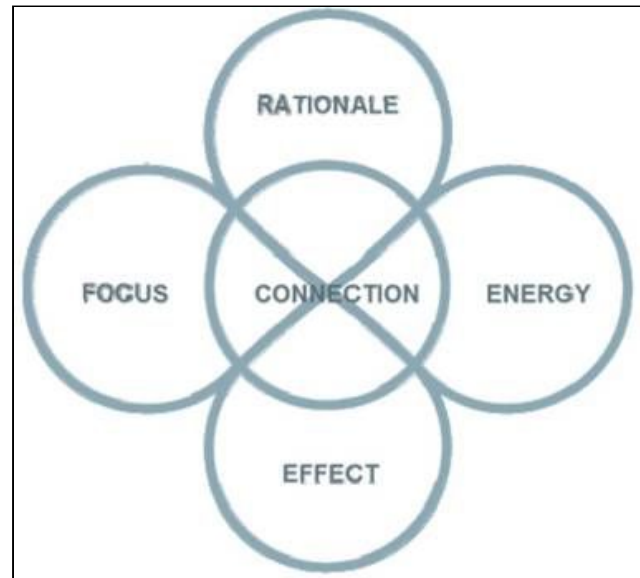


Figure 3: House of Lean with activities applicable to universities, from *A Study on the Students Perception of the Applicability of Lean Principles at Universities*

education. Some of the student suggestions reflect things that PSU already does, but others are opportunities to improve. It is also important to note: students in this study saw themselves as the

school's products and employers as the school's customers. This prompted them to think of the school's quality performance as it directly impacted them as quality products.

At the beginning of the lean initiative, these kaizen teams will undergo a short lean training, and then be assigned an academic or functional area to analyze and recommend modes of improvement. It is my strong opinion that some form of Lean Management should be required teaching throughout the School of Business, Engineering, and Public Administration, if not the whole university.



By ensuring that all initiatives and trainings have the elements of focus, rationale, energy and effect, the kaizen teams and stakeholders involved will be motivated and facilitate the changes sought. For this reason top management must provide a clear vision and ongoing support for the whole process.

Students are now free to focus on personal growth and actualization.

Portland State can also improve by actively supporting and even promoting extracurricular involvement of students. Students shy away from these activities when existential needs are more pressing. Yet, many employers will not consider students who lack significant project experience. For example Blue Origin (Jeff Bezos' commercial rocket company) states in its [internship applications](#): "Please describe FIVE projects related to Business Operations and Finance in which you have played a key role. Be specific about YOUR role and the skills and

tools YOU used”. This company is looking for real projects with real-world outcomes, not in-class case studies.

Thus I propose enhanced institutional support for students to form extra-curricular project teams. I am not promoting student societies or membership organizations, which are already prevalent in the school of business. While those societies are useful for helping students learn how to network, they do not provide the students with the kind of project experience that I’m calling for.

This proposal also draws from Lean: promotion of self-managed teams. I call on the school of business to promote the formation of student teams and to redesign classes to allow for these teams to integrate group projects/goals into the coursework. An example of this already exists in the PSU school of engineering. In the Portland State Aerospace Society, students of various majors will (ideally) get involved during their freshman or sophomore years, and take every opportunity to use class projects to advance the goals of the group. By the time they are seniors, they have become experts in their field and are highly desirable candidates for aerospace engineering firms, even though PSU does not have a formal aerospace engineering program. Another example, within the school of business, is FIR, which allows marketing and advertising majors to get hands-on marketing experience in an academic setting.

Students will be motivated to pursue their own interests while getting credit for their efforts (Expectancy Theory) while developing skills that are crucial in the workforce of the future. The Business School can also harness this motivation to continue on its own path of continuous improvement. The school establishes a **Project Marketplace** in which project groups seeking recognition for course integration submit proposals to advertise on a special job board

that is managed by the school (a kanban). Students may choose to dedicate themselves to one project team and its goal over the course of their college career, switch goals, or choose to be freelancers who pick projects from the job-board in accordance with their career objectives and goals. This creates an academic simulation of a real-world economy in which students develop and refine the skills crucial for future success. Many students already do this sort of thing as they build their portfolios. However the school can harness this phenomenon, using it as an engine to drive an enhanced student experience as part of the standard curricula.

The college will supplement the job board with its own projects that benefit the school. Instructors may require students to submit their own proposals as to why their selected project(s) will satisfy the learning objectives for the course, or handpick their own projects that better suit the needs of the class. The following section will outline further why this model would be of greater benefit to students than how courses are currently taught.

Portland State School of Business can more adequately prepare students for tomorrow's workforce needs.

A critical problem that both PSU and students face: the primary customers of the university are not always adequately served, which goes against the total quality principles of Lean philosophy. These customers are A) Students, and B) their potential employers. When students are concerned that they may have potentially worthless degrees because there is no job market for them, that is a huge failure on the part of the school. Likewise for employers to leave skilled jobs unfilled because universities fail to produce a workforce with the skills necessary. This is a sort of waste that affects the whole economy and society as a result. This is an opportunity for PSU to significantly contribute to the Oregon economy and workforce.

The World Economic Forum states in its 2016 Future of Jobs Report that skills such as those listed below are already in high demand. Moreover, Weerheim, et al, explain that students can gain these skills by participating in self-managing teams in *Successful Implementation of Self-Managing Teams*:

Social and Emotional Intelligence

With an increasingly globalized world, workers must be able to both self-monitor and relate to others effectively. This is increasingly important as machines take over more and more traditionally human jobs, we may see an increase in emphasis of job tasks that only humans with well developed interpersonal skills can fill.

(Fidler, David. [Future Skills](#) pp 10)

Cognitive Flexibility and Load Management

Situations are constantly changing, and flexible thinking must be used to be able to solve problems in this chaotic landscape. At the same time, workers are constantly deluged with new information. Because of this, they must also know how to filter out irrelevant information. “Adaptability and cognitive flexibility are important skills needed in the future workforce so that students are able to adjust the way they work when obstacles arise or business needs shift unexpectedly.”

(Wara, Gigi. [9 Skills Students Need in the Future Workforce](#), Teach.com)

Transdisciplinary approaches

According to a study of the interplay between global change and sustainable development by the Swiss National Center of Competence in Research using transdisciplinary methods:

This decade-long project brought together experts from disparate specializations to productively collaborate and cooperate towards a common goal. Their findings indicated that not only was transdisciplinary thinking more useful than former interdisciplinary research models, but it also significantly improved knowledge production over time.

(Fidler, David. *Future Skills pp 31*)

Systems, Design, and Computational Thinking

This is a skillset which many business students sorely lack, but which would enhance their ability to solve problems with vague or no problem statements provided, as well as to use programs like Excel and R programming. This should be noted because data analytics and the ability to make sense of the data are skillsets that will only continue to grow more important. As [Raya Bidshahri of the Singularity Hub](#) explains, “we consistently spoon-feed students with information instead of empowering them to ask questions and seek answers. Inquisitiveness and thinking outside the box need to be treated with the same level of importance the school system gives to physics or math.”

A growing number of employers already expect their new hires to be developed in these areas. Each of these desirable attributes is already taught on PSU campus, but the college can improve by better integrating these skills into the required curriculum.

Conclusion

The Portland State School of Business and the University as a whole face annual budget cuts, related tuition hikes, and a large yet unconventional student population. These factors present unique challenges, but not ones that are insurmountable.

Adopting Lean methodologies into its organizational structure and philosophy will empower the school to significantly reduce costs by trimming unidentified waste expenses and activities. Looking at Miami University as an example, it is likely that the School of Business can achieve significant cost savings without laying off a single employee. The resultant savings will then be used to improve support for disadvantaged students, enabling them to take advantage of college opportunities that they are otherwise missing out on.

The School of Business will continue to add value to its customers: the students and their prospective employers; by creating an academic **Project Marketplace** in which students gain the benefits of long-term project experience, including: advanced problem solving and systems thinking, emotional and social intelligence, and transdisciplinary experience. This project marketplace enables students to focus on work and build portfolios that are meaningful to their career objectives as well as their academic coursework; while enabling the school to continue its continuous improvement initiative by sharing the implementation process with the students who are most benefited by it.

Appendix: Transcript of BA 302 Interview

→ Why did you choose to teach at Portland State University?

Admin: I was an undergraduate student at PSU as a business student, majoring in marketing and management. I wasn't sure that I wanted to go into business, but I did know that I value education. Because the business school serves so many first-generation students from low economic status, it is in tune with the kinds of students that I care about.

Adjunct: At the time I pursued that, I was in the midst of a career change. I had just left a start-up company that unfortunately wasn't successful. And was looking to see what I would do next, and thought about trying something different. So I got "hooked up" at PSU, and that's how I got started. I reached out to someone who worked in the Finance Department and asked him how he made the transition from Intel to PSU. In talking to him, I was connected to Daniel Wong (the Supply Chain Department Head). And in meeting Daniel, I found out that he was looking to create a particular class, and I had a lot of passion and work experience around that subject that he thought would be valuable. So that's how I got into the "teaching thing".

→ What do you believe are the top three motivating aspects of your job?

Admin: 1) The mission. The students here aren't entitled. They are hard-working and tenacious. They work, they are involved in their communities, they have families, and they volunteer. 2) Interactions with those students. Being able to talk with them and talk to them about what they are doing is very rewarding to me. 3) Finally, seeing those students succeed, or when they respond to the school's investment in them by working hard!

Adjunct: 1) I have passion around the subject matter and I enjoy sharing it with others. 2) I have a fairly strong sense of giving back to the community: I do try to volunteer a lot, and I like the idea that I'm hopefully adding value to new people entering into the workforce and giving them information that will be useful for them. I think about my career and things I've learned along the way and thinking, "wow, I wish I would have known that back then". 3) Like I say in class (whenever I start a new class), this is definitely outside of my comfort zone, and so I'm stretching myself and learning new things myself, which I enjoy.

→ What are the top three most stressful things about your job?

Admin: 1) Having to be reactive and solve problems, often times that I did nothing to contribute to in the first place. This means frequently having to resolve issues between students and curriculum or faculty issues. 2) The number of emails and meetings that I have to participate in relating to my job. 3) My job as an administrator sometimes places me very far from students, and the further I am from the students that I serve, the harder it is for me to be motivated at times.

Adjunct: 1) I'm not a trained teacher, and so I don't have that background. So sometimes I feel like I'm not doing it right. That would be one... 2) It's a time commitment, so sometimes stress comes in the form of having a lot of papers to read, or having to submit grades by a certain date, and that comes with its challenges. 3) There's an element of me stepping outside of my comfort zone. I don't consider myself a good public speaker, so the thought of stepping up in front of a room of students is intimidating. But I've gotten better about that!

→ What is the definition of success in your job?

Admin: Quite literally, the success of the undergraduate program! The university distributes funds based on student enrollment, retention, and graduation rates. Specifically with a focus on transfer and underserved students. To meet the goals of my job I must make sure that the classes necessary for students to graduate are made available, maintain positive relationships with potential employers for students who graduate and smooth the way for students to continue on into graduate studies.

Adjunct: Anytime you have someone that connects the dots, and you see that they get it, that's really cool! I've had students come up and tell me "I was able to use something I learned in class, at work, and that was great!" When people tell me that they found value from something in the class that's really cool.

→ How does PSU try to motivate you to perform well? Is it successful?

Admin: The School of Business goes above and beyond in its support of me. During a time when I was working too hard for a prolonged period of time, the Dean at the time had me take a week off with no threat to my job to help me get my balance back in control. The school has spent a lot of time and money on its personal investment in me and has advocated for me and my needs. I plan to retire here.

Adjunct: That's where I don't think I have good input for you. I am a very isolated teacher. I really don't know that many people at PSU. I know Daniel, I know Dr. Raffo, and that's probably about it. I don't know very many people and very few administrators. I only come to campus when I have class, so I'm not around very often. So I think there's not much there that they do that motivates me. But I don't know that it's a knock on them, it's really more that's just my situation.

→ What can the school do to motivate you better in your role?

Admin: I wish that PSU could fund itself better. The institution faces budget cuts every year and maintains its funding on the backs of students who are already struggling financially to pay their tuition. Meanwhile, the state continues to decrease its funding of educational institutions and programs in favor of other spending priorities.

Adjunct: The thing that comes to mind for me personally would be to find ways to support someone like me, who's not a trained teacher, to improve in my teaching, without having to come to campus. There is a group called OAI that does offer help for faculty, but unfortunately, I've never been able to take advantage of their offerings because it's always in person. But I know when I have reached out to them they are always very responsive, so I don't want that to be a knock on them. They do things, and I just don't know if they record their sessions and if they are available. If they don't do that, that would be something that they could do to help me. I do get emails about stuff going on at the School of Business, and I just don't always have time and energy to look at them because of other things going on.

➔ **How can you tell that you have a motivated student?**

Admin: For one thing, when I see students who go above and beyond the requirements of their educational program! But that isn't an option for everyone. I recently scholared a paper with the Dean of Undergraduate Studies regarding the use of the School of Business' hardship fund. This included having one-on-one interviews with students to talk about how the help has impacted their abilities to succeed as students. The response has overwhelmingly been that as a result of the school is willing to invest in them to help them continue their education, they are highly motivated to succeed and to show the school that it made a good investment in them!

Adjunct: Usually they are the ones who ask questions. Or they will come up after class to talk to the teacher. It's usually those types who are motivated, and who do the extra credit or ask for additional information or other references. And the ones who ask why they got an answer wrong because they want to make sure that they understand it.

→ Within the current confines of your job, what can you do to help motivate your students more?

Admin: I can find ways to provide assistance to the students based on their needs and internal motivations. Sometimes I find myself needing to have talks with students regarding plagiarism and academic dishonesty, and it turns out that because of their background, they truly don't understand why they did something that was wrong, but then I'll have a discussion with them about how to learn, and I'll see a light turn on! These students usually go on to become much better students! However, there are still issues with students who are belligerently dishonest as well.

Adjunct: One thing I struggle with is that not everyone in class is created equal. I worry that I'm leaving people behind, or that on the other end of the spectrum, I'm boring people. So trying to come up with things that will be of interest and challenge someone who is catching on faster, and on the other hand, making sure I spend time with folks who are maybe slower in catching onto stuff. That's something I always am worried about and I don't have great ideas about how to solve that. I always try to vary what's going on so it's not always the same thing every time in the hopes that will keep people interested and appeal to people with different learning styles, so it's not always a lecture. Sometimes we play a game, and sometimes we have a discussion. One thing I think helps people get concepts is forcing them to explain it to someone else, so I'm trying to do that more in my classes.

→ Are there ways that you believe could motivate students to achieve more, but that your job does not allow?

Admin: Yes, more money. Or better yet, if we could find ways to help students to be more non-monetarily invested in PSU and their education. It would be great if we could find more ways for students to be willing to invest more of their time and energy outside of class to take advantage of those opportunities that are available to them here, but not anywhere else outside of school! One thing I wonder about that might actually be possible is: what if we included students in curriculum development, and gave them more flexibility in the direction of their studies?

Adjunct: Time is always one of those precious resources that you never have enough of. If I had more time to talk one-on-one with certain students it might help them. Whenever you're trying to learn something and you're not getting it, it's very hard to stay motivated unless you just have that drive. Not everyone has that gift of grit. You can practice this but it's really hard. I don't want people to get frustrated to the point that they want to give up, so I ask them to come to me if that happens so I can help them get past that block. But a lack of time prevents me from having that kind of connection with everyone. The class sizes that I have are not enormous, but smaller group sizes are better, I think, in order to find out what it is that motivates people. And then you can work towards whatever that style is. In a larger group, it's harder to figure that out.

→ How do you manage failure regarding your job?

Admin: I'm very lucky that I have people at work with whom I can talk about my failures and frustrations. This is important to me because I need to be able to process it openly, and having conversations with people help me to identify my part in why things failed so that I can either find a solution or at least improve and learn from it.

Adjunct: My very first class I co-taught with another professor, he was the official teacher and so I didn't have to handle the administrative stuff. The first class that I taught by myself, it was horrible. I feel really bad because I doubt that anyone in that class continued on in supply chain. That was a big failure, and I am motivated to try and improve, so there was a lot to improve upon in that class. How do I manage failure? I see it as an opportunity to improve, a learning opportunity. I value feedback, and failure is a form of feedback telling me what not to do. I also talk to people who will tell me that I'm awesome and give me another perspective.

→ What do you do when you see a student/subordinate is struggling to meet the demands of their job?

Admin: (Unfortunately, the administrator needed to attend another meeting right at this point, however, they had mostly answered this question earlier in the interview).

Adjunct: What has seemed to work for me is to try to be available to listen. I've had students going through some crazy stuff while still trying to be a student. I think being an ear helps them, but I also try to be flexible. I have a job, and a lot of students have jobs, so they've got full-time jobs and they're trying to be full-time students on the side. And I recognize the strain that can put on you, so I try to be flexible with due dates, and offering extra credit because sometimes someone just had a bad week and did poorly on an assignment. There's a fine line though between being too flexible, you know, being a student you need to learn how to manage things in order to get things done. You can't always get around due dates in the real world, but if someone is having an incredibly stressful week then I try to help them out.

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