UPCOMING EVENTS

R&CW Conference
February 1 - March 3 | Open Submissions for Abstracts
March 30 at 4:30 - 6:30 pm | Conference - BYUI Center
We invite faculty to encourage students to participate in this important showcase of learning.

SAVE THE DATES

Instructional Workshops
February 9 & 10
March 9 & 10
Are you wondering how to get good teaching ideas into practice? These one-hour instructional workshops go beyond the introduction of ideas to demonstrate, in practical ways, how you can implement these ideas in your classroom.

Brown Bag / Pie Talk
February 16 & 17
March 16 & 17
Brown Bag Discussions offer faculty an opportunity to share lunch together and listen to their colleagues speak about topics related to learning and teaching. Faculty have the freedom to speak about things they feel are innovative and enlightening, items they find successful in the classroom, and best practices.
IN THIS ISSUE OF PERSPECTIVE

Masic, Miokovic and Muhamedagic define evidence based medicine (EBM) as “the conscientious, explicit, judicious and reasonable use of modern, best evidence in making decisions about the care of individual patients.” They explain that “EBM integrates clinical experience and patient values with the best available research information.”

As faculty at BYU–Idaho, the relationship we have with students is similar to the doctor-patient relationship. The first of the three imperatives we have been given is to raise the quality of the student experience. That requires the “conscientious, explicit, judicious and reasonable use of modern, best evidence in making decisions,” not about the care of patients but of students. At the fall 2016 Faculty Conference, presenters shared ideas and evidence about how we as faculty can improve the student experience.

In teaching, as in medicine, there are different levels of evidence and at times we may be inclined to reject any intervention or practice that does not meet the most rigorous standards of scrutiny. The folly in this line of thinking is highlighted by a systematic review of randomized controlled trials (the gold standard in medicine) published in the British Medical Journal. Gordon and Pell conducted a systematic review with the stated objective, “To determine whether parachutes are effective in preventing major trauma related to gravitational challenge.” They stated that, “We were unable to identify any randomised controlled trials of parachute intervention.” Based on their study, they concluded, “As with many interventions intended to prevent ill health, the effectiveness of parachutes has not been subjected to rigorous evaluation by using randomised controlled trials.” After reflecting on the best available evidence, we are still left to determine whether we should recommend parachute usage to those jumping out of planes. If we are paralyzed by lack of high quality evidence, we might neglect to use the best available evidence combined with experience and common sense to make decisions.

We should search for “best practice” in implementing change to our teaching methods. “Best practice” includes making decisions using rigorous scientific research when available, combined with practical experience. This issue includes articles from the conference that we hope will be useful as you make decisions that will benefit our students and improve the quality of their BYU–Idaho experience.

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When I was 17 years old I was invited by my father to attend an annual fathers and sons outing. Normally, I enjoy these excursions. But this year I was hesitant to go because of a mandatory sports meeting I had the following morning. I was worried that if I missed the meeting, it would jeopardize my playing time, or even my opportunity to make the team the following season. My father, who was the Bishop, assured me that we would stay for the evening’s activities and then leave early in the morning so that I would arrive on time to my meeting. Feeling reassured by my father, we left for the activity which would be held at Bill Berry’s Cabin.

We had a wonderful evening with the fathers and sons of our ward. We enjoyed a wonderful meal and wonderful activities together. The following morning, we awoke early, jumped into our old Ford Courier pickup, and began our journey along the old dirt road toward the highway. As we approached the bridge that spanned a ravine along our path, my heart sunk because the bridge we had crossed the day before was no longer there.

The bridge had not collapsed, nor had it been washed away by the current of the small stream. Rather, it was being replaced by the homeowners association. None of us in attendance had anticipated the bridge would be replaced that day. As we got closer we could see a group of men who had removed all of the planks on the bridge, leaving only the two supporting beams. We asked them if there was another way out of the area hoping that we could quickly find another way to the highway to make our return trip. They looked at our small Ford Courier and declared, “Not in that truck.”

I was so anxious and disappointed, but my father did not seem as apprehensive as I did. He exited the truck and began to survey our situation. He looked at the truck, and then looked at the supporting beams which spanned the ravine. He looked back at the truck, back at the beams, and back at the truck again. He then approached me in the driver seat, and with a mischievous grin said, “I think we can do this.” With a bit of trepidation and curiosity I asked him, “What is your plan?” He explained to me the details. He said, “It’s really simple, we are going to drive across those beams. I think it’s just wide enough that we can get our tires on those beams.” He then added, “Here is what we were going to do. You get in the truck; I’m going to go across to the other side.”

My anxiety was heightened as I realized what he was asking me to do. I appreciated his confidence in my driving ability, especially since this was a manual transmission.

We drove the truck, to the dismay of the workers, to the edge of the ravine and lined up the tires with the beams. One of my tires fit perfectly on the beam. The other tire fit mostly on the other beam. There was about 2 inches of my tire that would be hanging off of that beam. My father then explained the most important part of this process, as he said, “You drive the truck and watch me!” I could hear in his voice the critical nature of my focus being on him. He then added, “You don’t look around, you don’t try and figure out where you’re at, you watch me and I will guide you.”

My father got to the other side, I shifted into first gear, and slowly, very slowly began to inch my way across those beams.
helped me focus on the principles of teaching and learning, more than the methods of teaching. It is the principle of vulnerability, which as Brené Brown (2010) describes “giving up the ability to control and predict.” It is not knowing the best way, not having the answers, not feeling in control. It is questioning, wondering and even fearing the unknown. Vulnerability forces us to rely on something or someone else at times.

In order to understand this principle more fully, we need to review the stages of learning (Anderson, Stone, 1985). These principles are: unconsciously incompetent, consciously incompetent, consciously competent, and unconsciously competent. For those who have ever learned how to ride a bike you will recognize each of these stages. Before long, the training wheels come off. We feel quite competent, and soon we are riding without even thinking. At that point, we have become unconsciously competent at riding a bike. It has become a habit of expectation. Everything we have learned had to go through each of these stages, until it became a part of who we are. We no longer think about tying our shoes, brushing our teeth, or even driving. But being competent doesn’t necessarily mean we are doing it right. It means we are doing it the way we learned how to do it, and sometimes habits of expectation can betray us. I learned this the first time I rode a bike that did not have pedal brakes. It was a sickening feeling to push back on the brake only to feel the pedals spinning aimlessly backwards. I had never once conceived the idea of stopping my bike with my hands. Thankfully a tree was able to quickly decelerate my forward motion.

The value of vulnerability, gives us the opportunity to question the assumptions we have created over time. The difficulty is that we don’t want to. We feel very comfortable where we are in our lives. But questioning becomes the key to self-improvement. Thomas Delong (2011) described vulnerability using four quadrants. The stages of learning take us from the bottom left quadrant to the upper left quadrant. We move from doing something poorly to doing something well. But if we realize that we are doing the wrong thing well, we are faced with the prospect of experiencing vulnerability. I had this experience when beams. My father focused intently on my wheels would signal minor adjustments that needed to be made. When I was about halfway across the beams I noticed that I was much higher than I had anticipated. Being curious I leaned my head slightly over to the side window, to see how high I really was, when I heard my father yell at the top of his voice, “stop!” As I shifted my attention back to him I could see the concern in his eyes. And then he said, with his hands pointing to his face and with a determined voice, “You have to look at me.”

I didn’t realize in that small moment of glancing over the side, that I had taken my eyes off of my father, and my whole direction had shifted. It had shifted enough that my tires were barely on the beams. He instructed me with the corrections I needed to make and, to the bewilderment of the workers I proceeded to cross the bridge. We made it home and I made it to my meeting on time.

I learned a valuable lesson in that experience. I learned that sometimes we lose focus on those things that are most important in our lives. I took my eyes off of my father, lost focus, and almost lost my way. As educators we are constantly surrounded by distractions that come in forms of new educational philosophies, new methodologies, and even new technologies—lest we forget Brightspace.

Today, I would like to focus on meaning more than method. I would like to share with you a principle that has
I switched from a PC to a Mac. Now let me clarify that when I say wrong, I am not speaking morally, even though we know what PC stands for (personal computer).

When our department decided that Mac would be the official computer we would use, I decided to switch. I was proficient using a PC, but realized in order to keep up with the change in our department I was going to need to switch. Now, the prospect of change seemed easy. How difficult could it be? Five minutes after I got my new computer, I was on the phone to Dan Peterson asking him where the right-click button was. At that moment I began to feel quite vulnerable. I began to question if I had made the right decision.

Vulnerability is not comfortable, but it leads to continued improvement and progression. It’s a type of progression through regression. I had to acknowledge and accept that I would be doing the right thing, even though I would be doing it poorly. We all realized that the upper right-hand quadrant is where we want to be, but it’s only obtainable by going through the lower right-hand quadrant. I must do the right thing poorly before I can do it well.

Looking at the graph it seems so simple, but it’s much more difficult than we think. Stephen Brookfield (1995) suggests that all of us must become critically reflective teachers if we want to be the best we can be. We have to constantly ask ourselves if what we are doing is the best, and the right thing for ourselves and our students. In fact, he states that there are two questions all teachers must ask in true critical reflection. He states, “The first is to understand the considerations of power and how they undergird, frame, and distort educational processes and interactions. The second is to question the assumptions and practices that seem to make our teaching lives easier, but actually work against our own best long-term interest.”

If we are constantly questioning and critically reflecting, if we constantly explore, if we intentionally seek out vulnerability, then we will eventually do the right things well. However, the prospects of vulnerability are so uncomfortable that most people will naturally resist. If we are not willing to critically reflect, then we might experience what Jack Mezirow (1991) calls a “disorienting dilemma” which will help, if not force us see where we need to change.

Ignaz Philipp Semmelweis is a wonderful example of someone who experienced a disorienting dilemma that led to a transformational change. Semmelweis discovered that mid-19th century women were dying from childbed fever at a higher rate when they were attended to by physicians, then when they were attended to by midwives. The dilemma was so bad that women would give birth in the streets, just to avoid contact with physicians. Fortunately for all of us, Semmelweis’ disorienting dilemma led him to critically reflect on the problem. He accepted the vulnerability that perhaps the very thing that he was doing was the cause of childbed fever. Because of his disorienting dilemma and critical reflection, he was able to reduce the mortality rate of those attended by the doctors and he became a forefather to germ theory. Ironically, his initial theory was absolutely false, as he believed he was transferring cadaver tissue to the mothers which was causing their deaths. However, as he followed these
transformation principles, they led to critical practices that have saved millions of lives (Britannica.com, The Arbinger Institute 2000).

The problem that I have discovered is that change is the easy part. It is making our way through vulnerability that is difficult. Perhaps this is due to the assumption that at the core of vulnerability is “shame, fear, and worthlessness (Brown, 2010). I experienced this over the seven week break when my wife and I decided to do a small remodel. We wanted to install a sliding door to our back yard. We saved enough money to add some flooring to the dining room. When you get a new floor you need new molding, new wall paint, a new chandelier, new furniture, etc. In order to save some money I decided to do the work myself.

As I was working on the molding, I was using a type of molding that I had not used before. I measured and went out to my saw to cut it and came in and discovered I cut it too short. I was so angry and upset that I had done it wrong. So I measured it again went out and cut another piece only to discover that I had cut it long enough, but I had cut it backwards. I went out again, turned it around and upside down, and recut it only to discover that I had cut it upside down and backwards this time. And at that moment I did what any of you would have done— I swore! I swore that I would never, ever do another remodel job in my life. But why? Why did I feel that way? I felt that way because sometime in my life someone taught me that errors and mistakes were failure. But the reality is that errors and mistakes are opportunities for learning. As teachers, we must be learners. We must constantly question what we’re doing, how we’re doing it, and the reason why we are doing it. Because in doing so we also find that vulnerability is, “the birthplace of creativity, joy, connection, belonging and love” (Brown, 2010).

Now, I’m not suggesting that I’m the most proficient at using a miter saw, but I improved in the process of being vulnerable. Now as I look at my teaching and as you look at yours, are we critically reflecting, or do we need to pray that we have a disorienting dilemma? Because departments and colleges merge, programs are eliminated, new classes need to be changed, and old classes need to be done away with. In those moments of disorienting dilemmas, how will you react? Will you see it as failure? Will you be angry and upset? Or will you see it as an opportunity for learning and for growth? Perhaps the most important part of experiencing vulnerability is that it allows us to empathize with our students. Think of how vulnerable they must feel as they

We need to be caring, kind, and compassionate. We need to be empathetic and understanding. That doesn’t mean we are easy, but we try and put ourselves in the perspective of our students.
come to campus with new classes, new roommates, leaving home for the first time, or leaving home for the last time. What a feeling of vulnerability they must be experiencing. As we experience vulnerability, it makes it easier for us to mentor our students as they experience it themselves.

From my own personal research at the University of Idaho, I have discovered that if we allow ourselves to be vulnerable enough to make connections with our students, we will help them along their path of discovery. We need to be caring, kind, and compassionate. We need to be empathetic and understanding. That doesn't mean we are easy, but we try and put ourselves in the perspective of our students. One of my colleagues was asked by a student if they could postpone an assignment. My colleague told them they needed to complete the assignment on time or receive a zero. They expressed confidence that the student would make the right decision. I think the temptation with empathy is to be too easy at times. But in doing so, we might be taking away from a valuable learning opportunity for that student to experience vulnerability, which may lead them to greater change and transformation. The student later wrote to this professor and thanked them for accountability and for teaching them the value of doing hard things.

Our students also need us to exemplify honesty, integrity and authenticity. We need to be someone who can be trusted more than admired. I have often heard people debate whether we should be a guide on the side or a sage on the stage. I chuckle at that discussion as it seems obvious to me that we should be a “Sage on the Side.” As Dante went through inferno I think he was grateful that Virgil knew a little something about what was going on there. Not to be a tour guide, but to teach and to train how to avoid destruction and obtain eternal life.

I hope that we all have the same goal to make it to our eternal kingdom. I hope we appreciate the journey before us. I hope that we appreciate the moments of vulnerability along the way. I hope that as we critically reflect and experience the inevitable disorienting dilemmas on our path, that we will keep our eyes on the Father, who will lead us, guide us, and, if needed, correct us along our narrow path.

The Arbinger Institute. Leadership and Self-Deception: Getting Out of the Box. San Francisco0.
It’s Monday, 8:30am. My hair is still frozen from the short walk across campus in subfreezing temperatures. I take my seat just before class starts with a certain sense of dread. Sure, getting up early and being to class on-time is hard, but this is my Research Methods in Psychology class – how am I supposed to be excited about this? My friend Matt just told me research was stupid, pointless, and, at best, boring—and he is not the only one; Heather said it was the worst class ever and one that I would never use in the future—just a bunch of time spent reading in a library. I wonder if I can get out of this class...no, that’s right, this is a required class, and I have to take it, just sit here and take it—there is no other option. Just do what you have to do to pass this class and then get out, no looking back.

Although this is a personal story during my undergraduate years at Utah State University, it might as well be the story for most students I have interacted with in the field of psychology, other social sciences, and the physical sciences here at BYU–Idaho and several other educational institutions. To BYU–Idaho faculty, these attitudes pose a formidable barrier to educating students on the benefits of research and conducting research. As such, we need to find ways to overcome these negative attitudes.

As I see it, we have three key points of leverage which will help overcome these negative attitudes, help in student achievement and faculty productivity, and engage students in research. Students will not be able to appreciate the value of research until they are 1) doing something beyond the typical classroom, 2) are motivated in a topic of personal interest, and 3) are able to apply it in some personally meaningful way. Although there are myriad ways to do this across our respective disciplines, I have explored two modalities here at BYU–Idaho that can address these three points while improving student outcomes and faculty research productivity.

Students can get involved in an in-class research study, which I have employed in my Health Psychology (PSYCH 435) class. They begin the class participating in this pre/post study by completing an online survey and personal health assessment before and after a personal
health behavior change (e.g., exercise) they attempt for six weeks. Once that is completed, students then conduct their own investigation examining similar data from prior students in PSYCH 435 to investigate research questions they have and then present their findings to the entire class. Next, students can engage in the research process outside of the formal classroom setting. I have done this two different ways including where I mentor student research done by students who have approached me with questions that personally interest them, and where I have solicited students to join me in my own personal research efforts to explore psychological phenomena. I detail these two modalities below.

First, by incorporating a behavior change research project into my class curriculum, my students get engaged in research by participating and then analyzing/interpreting the data. Students initially select a health behavior they would like to personally improve (e.g., exercise, diet, sleep), make appropriate goals, track their progress on reaching these goals for 6 weeks (Week 3 through Week 8 of the semester), meet with other students in the class with similar goals for social support, and complete a pre and post health assessment including both self-report data (e.g., exercise, mood, stress) and physical biometric data (e.g., weight, blood pressure, body fat percentage). With this research design (see Figure 1) comparisons can be made between students (e.g., exercise groups vs. diet groups), or over time for individual students (e.g., pre vs. post assessments), enabling the answering of many interesting and provocative questions. Students are then allowed to come up with questions that are personally interesting to them (e.g., based on their experience in the health behavior change project), meet with me one-on-one during office hours to analyze the data from prior classes (not their own to preserve confidentiality), and then give presentations to the class about what they found and what they would recommend for future behavior change programs. I have discovered that this in-class research implementation has been simple and mutually advantageous to students and faculty. Students personally benefit from participating in research as part of the course curriculum while faculty can also benefit from exploring their own research interests within the course topic.

Second, using a combination of students’ request for mentorship (student interest-directed) and direct solicitation of high-performing students (faculty interest-directed), I have led several small research teams to investigate psychological questions that are interesting to both students and me. Typically, the research team and I meet weekly to discuss important elements of the research process including literature review, research design, data collection, proposal submission to the Institutional Review Board, and then present their findings to the entire class. This process has led to many interesting and provocative questions, enabling the answering of many interesting and provocative questions. Students are then allowed to come up with questions that are personally interesting to them (e.g., based on their experience in the health behavior change project), meet with me one-on-one during office hours to analyze the data from prior classes (not their own to preserve confidentiality), and then give presentations to the class about what they found and what they would recommend for future behavior change programs. I have discovered that this in-class research implementation has been simple and mutually advantageous to students and faculty. Students personally benefit from participating in research as part of the course curriculum while faculty can also benefit from exploring their own research interests within the course topic.

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Board, data cleaning and analysis, and presentation in some academic venue (e.g., conference). Naturally, my time is limited and I cannot do this with many research questions during a single semester. As such, I encourage many students to collaborate with me on a single research topic that, again, is mutually interesting to us. My students and I have had success with this approach over the past three years, where I have supervised 17 student interest-directed (SID) projects with 37 students and 3 faculty interest-directed (FID) projects with 10 students. All of these have produced something beneficial to the student and me, ranging from the relatively simple poster presentation at our local Research and Creative Works Conference to a publication in a nationally recognized professional journal. In fact, this has enabled me, as a faculty member at a teaching-oriented institution, to remain productive in research, thus enhancing professional development (see Table 1). Even more important, out of the 47 total students mentored, 11 (23%) are in graduate school and 19 (40%) are employed in research-oriented positions. This suggests that student mentored research is a way to confront and perhaps overcome negative attitudes to produce beneficial effects for students and faculty.

Of course, there are some challenges and benefits to these two modalities. Three primary challenges hindered my ability to apply these effectively. First, time is limited when teaching full-time, mentoring students with their career goals, meeting committee and service obligations, and managing other responsibilities. From my perspective, there is no real way to resolve this issue completely. However, I have found that with good personal organization of my daily tasks, I typically find some time to invest in professional development, which, for me, is often this student-mentored research. Second, other resources are also limited, such as funding, equipment, and human resources. It is imperative to have a professional development plan carefully crafted with specific considerations for the future, including research. Moreover, in reference to the health psychology

With positive attitudes and basic research understanding, students will be better informed and able to contribute meaningfully in society.
(classroom) data collection project, it is absolutely critical to get the right personnel to help with the project (e.g., Teaching Assistant, Research Assistant). Third, these research designs, especially the individual research projects option, are limited in the number of students that can be reached. In fact, in my case, I started off by having only one student working on a project, but quickly realized it is much better to involve multiple students per project. Of course, as more students get involved, more faculty time is required, so there is an optimal balance that must be achieved.

Challenges aside, the many benefits of adopting research-focused approaches in our teaching are incredibly rewarding for all involved. First, and most importantly, I have informally seen dozens of students’ attitudes about research change and improve. This is a great improvement over that typical first day of class, where many come in with negative attitudes and few understand anything about research. With positive attitudes and basic research understanding, students will be better informed and able to contribute meaningfully in a society that is often blown to and fro from differing points of view, varying opinions, and even reported statistics that may be misleading. Second, these types of research-oriented experiences can greatly aid our students who are heading to graduate school or the job market. Experience in designing a research study, collecting data, analyzing data, and giving presentations at conferences truly help our students stand out as candidates for graduate school or the job market. As a case in point, a student researcher I worked with on a student interest-directed study was recently accepted into a doctoral program in Social Psychology at Arizona State University due to his in-depth experience in research that led to a publication as an undergraduate student. Another student researcher I worked with on a faculty interest-directed study was recently hired as a regional manager for Walmart right out of his bachelor degree program here at BYU-Idaho (surpassing several others with advanced graduate degrees) because of his intimate experience with research and data analysis. Third, faculty can also benefit from these experiences with research conference presentations and publications with students, thus further benefiting faculty and student professional development. Faculty can keep abreast with the research literature, maintain and sharpen many of their research skills, and improve their teaching through the addition of student-collected data, which can serve to inspire and help many other students as they see their peers’ examples.

To conclude, student-mentored research is rewarding for many reasons and can be for all of us involved. Truly, if we want our students to gain an appreciation of the scientific process of research, we must get them doing something outside of the typical classroom, working on something that is personally meaningful to them that they can apply to their lives or understanding. My hope is that by sharing these two methods I have been using in my own student-mentored research efforts, others will join me in the effectual struggle against negative attitudes toward research. I am confident that we can help the rising generation appreciate research in explaining the world around them, improving life’s difficulties, and obtaining a better understanding that goes beyond mere opinion and speculation.
Table 1. Research Projects and Outcomes as Student-Mentored Research

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<tr>
<th>SEMESTER</th>
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<th>STUDENTS</th>
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<td>Health behavior evaluation: A multi-wave longitudinal study on health and wellness among college students at BYU-Idaho</td>
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<td>Social facilitation in sports: Performance in the presence of the opposing gender</td>
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<td>Safety and health support for home care workers: The COM-PASS randomized controlled trial</td>
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<td>SID</td>
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<td>The effects of assessment on body image in female young adults</td>
<td>RCW; PSI CHI; RMPA</td>
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<td>The beautiful and the damned: Exploring the negative side of masculine attractiveness in hiring situations</td>
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<td>Self-Regulation and health behaviors: A descriptive study of a highly religious university</td>
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<td>Getting the girl: The Matching Hypothesis within religiosity and academic performance</td>
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<td>Health behavior change: A longitudinal study of the effectiveness of a health psychology intervention</td>
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<td>Assessing interpersonal conflict in the workplace: A validation of the Workplace Interpersonal Conflict Scale (WICS)</td>
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<td>Performance, motivation and self-control: Power of incentives and distractions</td>
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<td>“The measure ye mete”: Social identity priming and moral judgment</td>
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<td>1</td>
<td>Self-esteem and social perceptions: Does my self-esteem affect my view of others?</td>
<td>RCW</td>
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<td>Marital satisfaction: The relationship between prosocial behavior and personality characteristics among newly married students</td>
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<td>Assessing interpersonal conflict in the workplace: A preliminary examination of the psychometric properties of the WICS</td>
<td>RCW; WSH</td>
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<td>WINTER 2014</td>
<td>SID</td>
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<td>The impact of female vocalization on male benevolent sexism</td>
<td>RCW; PSI CHI; APS</td>
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<td>FALL 2013</td>
<td>SID</td>
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<td>Ambivalent sexism: The impact of exposure and awareness</td>
<td>RCW</td>
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Note: SID means Student Interest-Directed, FID means Faculty Interest Directed; RCW refers to BYU-Idaho’s Research and Creative Works Conference that semester; Psi Chi means the annual Psi Chi (national honor society for psychology) conference held down at Idaho State University; RMPA refers to the annual regional Rocky Mountain Psychological Association conference; Pub1 is a publication in the American Journal of Public Health; Pub2 is a manuscript under review in the Undergraduate Research Journal of the Human Sciences; Pub3 are published in the Psi Chi Journal of Psychological Research; PUB4 is a manuscript under review with the Journal of Organizational Behavior; WSH is an international annual conference entitled Work, Stress & Health; APS is an international annual conference held by the Association for Psychological Sciences.
Student-Directed Learning: Using the Learning Model to Enable Engagement and Augment Learning

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The transfer of knowledge from one classroom to subsequent, related classrooms has been the subject of research for a long time (Bergman and Zepernick, McCarthy and Fishman Clark, Florence and Yore, Tardy). Some of the potential ways to encourage more transfer include 1) focused and directed engagement with assigned work, 2) receiving pre-grading feedback and 3) clearly articulated, stable assignments. As I have focused on accomplishing these goals in the writing classroom, both the learning model and conversations with colleagues in the English department have heavily influenced what have ultimately become successful classroom approaches that enable transferrable student learning. While this paper reports concepts used in my instruction of Foundations writing courses, I believe the concepts are easily applicable in most other instructional situations.

First, students engage more readily with classroom concepts when their study is focused and directed. Specifically, students who prepare to participate in class discussions by performing focused roles within structured reading groups have the structure necessary for effective learning engagement. In that vein, BYU-Idaho English professor Quinn Grover suggested an article entitled “Using Structured Reading Groups to Facilitate Deep Learning” (Parrot and Cherry), which argues that deeper learning occurs when students are 1) given specific critical thinking tasks to perform as they read and 2) are required to prepare to teach what they learned to their teammates. Specifically, the article suggests that instructors identify disciplinary habits of thought, divide them into five unique roles, and provide students explanations for how to accomplish those target abilities. The class is divided into teams of five and each student performs a different one of the five roles for each reading; while I use the Paul-Elder critical thinking model (Paul and Elder) as the basis for these roles, I believe any systematic approach to the discipline would work. To complete each role, students will need to employ their assigned thinking tools as they read and write a brief paragraph analyzing the assigned text. When they arrive in class, each student is prepared to discuss the thoughts emerging from their analysis within their teams; these discussions often
revolve around the intersections of the various ways of thinking. After discussing their thoughts in their teams, each team generates a question, which question, which questions drives the discussions in the class as a whole. This approach results in students who have interacted deeply with the assigned reading; are able to articulate implications and its interrelations with work accomplished in the class; as well as team and class discussions in which individuals have a personal investment.

In practice, this concept works almost as well as the theory suggests. In classes where I have used structured reading groups, the depth of thought and the engagement in conversations about concepts the students typically see as “boring” as how to quote properly have been markedly more intellectually engaging. I often stand aside while my students bring up many of the points and questions I would have wanted to discuss; however, since they’re the ones asking and answering the questions, their depth of engagement and understanding (as manifest in their written work) is significantly greater. As the class engages the various questions proposed by the students, I often have to cut the discussion short, something I never had to do when using other delivery methods, such as lecture, Powerpoint, journaling, quizzes, and study guides. In addition to the quality of the discussions, by giving students guided practice in target ways of thinking, I find that structures of thought manifesting themselves in their other writing assignments, and have even had students accuse me of making them think critically outside the classroom, as they interact with media as diverse as advertisements, Facebook posts, and movies. Generally speaking, through structured reading groups, I find that students readily engage classroom concepts because guided practice in target critical thinking skills enable them to think more deeply and fruitfully.

In addition to using focus and structure to enable engagement, as students receive pre-grading feedback, they are more likely to learn and transfer knowledge. While there are numerous peer evaluation models, in my own instruction, I have found BYU-Idaho English Professor Steve Stewart’s evaluation workshops to be the most beneficial in terms of learning, growth, and useful feedback because teammates play an essential role as both teachers and evaluators. In conversations with him, he helped me understand that students teach one another as they evaluate their teammate’s work, investing in one another’s success; in addition, as students continually interact with one another’s work, their teammate’s homework serve as alternate models, deepening each student’s understanding of concepts. Early in the semester, students are provided with specific criteria for creditability; work is evaluated and either credited or returned for revision based on these general criteria. However, before the instructor sees any of the work, it must first pass the team’s evaluation: each team member examines work submitted on designated workshop days, deciding whether they feel it’s creditable or not. If the team feels work is not creditable, they provide
criteria-linked feedback and the work is revised for the subsequent workshop. If it is, the team recommends the work to the teacher, who also evaluates the work based on the criteria. If the teacher agrees, the student receives full credit for the work. If not, the teacher returns to the team and explains why the work is not yet creditable; the student is invited to revise his/her work for the next workshop day. The students' final grades are calculated based on how much creditable work they completed.

In practice, this concept also works quite well, with one needed adjustment. As I've experimented with a variety of pre-grading feedback, no other approach yielded as much learning and growth as this type of evaluation workshop. As students evaluate one another's work, the expectations of the assignment become clear, as well as the range of possibilities for completing the assignment. In addition, I have found it only takes a team one or two explanations before they will no longer recommend work that fails to satisfy a given criteria. As my students come to understand my explanation and how it applies to their team's work, students gain an explicit understanding of both the expectations and why those expectations are essential in the discipline. As teams use this explicit knowledge to teach one another, they become heavily invested in one another's success; many even started holding their own informal evaluation workshops to ensure that everyone on the team had creditable work to submit. The only drawback I found to this pre-grading/grading methodology is

Students teach one another as they evaluate their team-mate’s work and invest in one another’s success.

the tendency for students to procrastinate, resulting in enormous amounts of work being submitted in the last few evaluation workshops of the semester. To avoid this, I suggest that due dates for initial drafts of work be set, and the students be required to submit a revised copy at each subsequent review day. Students who fail to do so forfeit the available points for that particular assignment. With this adjustment, I feel the pre-grading/evaluation model above not only results in greater learning and a significantly increased ability to work as a team, but also significantly reduces the grading load.

Finally, as we allow students to propose their own clear, stable writing prompts, the “ponder and prove” element of the learning model can also encourage knowledge transfer. Generating assignment prompts that are clear and stable to all students is always difficult, given the many nuances of the language and varied levels of student preparation. Like most teachers, I have continually struggled to enable knowledge transfer through assignment prompts. After numerous iterations of various assignments, I realized that, if a student generated their own assignment prompt, it would be clear and stable to them. For example, fdeng301 focuses heavily on written argument. After teaching students the basics of effective writing and argument, I invited them to generate four assignment prompts, each based on a different mode of argument. Students used the textbook to explore the various modes of argument and locate a mode of argument that fit the type of point they wanted to make. In order to ensure that they had understood argument and the writing the argument genre required, students completed an extensive writing proposal template before they started writing. This proposal template required them to pre-think about audience and purpose, as well as the claims, evidence, and rhetorical choices that would enable them to accomplish their purpose for their audience.

The results were surprisingly powerful in terms of the levels of student engagement, the quality of writing, and the depth of understanding. The proposals were in-depth and displayed a definite understanding of the principles under consideration. Many students had gone above and beyond the simple requirements of the prompts I had given them, providing an in-depth overview of their purpose and audience. After project approval, students were excited about their writing as they researched and wrote them. The final products were some of the best writing I had seen from them. Clearly, the engagement levels, coupled with a clear and stable self-generated assignment prompt had enabled learning at a different level from what they had been accustomed to.
As a whole, I can recommend the structured reading teams, the mastery learning approach to assignment grading, as well as allowing students to propose their own assignments, based on criteria given by the professor. With very few exceptions, my experience with these strategies has enabled me to both overcome drawbacks I had seen in other approaches to instruction and directly encourage student engagement with the projects at hand. I would be happy to answer any questions regarding any of these approaches.

Works Cited


Streamlined Online Course Development

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In many ways, the title of this article is misleading. This article is not limited to just those building online courses, but for all instructors building or maintaining online or campus courses. The word “online” was included in the title of this article for two reasons. First, the problems discussed here seem to manifest themselves more in online development than face-to-face. Second, with our online initiative in full swing, more online courses are being developed right now than face-to-face courses.

Most of this article will focus on four overarching principles lifted from software engineering and instructional design: design top-down, design before you build, have a strong course council, and manage your technical debt carefully. At the end, some additional thoughts will be presented that are designed to help you prevent common development pitfalls.

Design Top-Down

In order to understand the importance of top-down design, it is necessary to discuss cohesion. Perhaps this is best explained by example.

Imagine a course (and I am sure we have all taken or even taught a course like this) with a completely irregular schedule. Every week is different from the ones before it with no obvious pattern. The assessment strategy is complex. There are many types of tests (quizzes, exams, unit tests, etc.) and assignments (homework, labs, projects, etc.), each of which have no apparent relation. The reading assignments appear random. They jump all around the textbook, randomly skipping some sections or including others from different chapters. In this scenario, a diligent student can do well by carefully reading the schedule and planning ahead. However, the average student will struggle. Students will come to class without doing the reading; students will ask “what are we doing today;” deadlines will be missed, and students will ask “why are we learning this?” In short, the complexity of the class design is a hindrance to the desired learning that needs to take place.

Contrast this example with a cohesive course. The schedule is completely regular with every week being similar to the week before it. The assignments follow a consistent pattern with the expectations well understood by all the students after the first couple weeks. The grading scheme is easy to internalize and most students could explain it to you if you asked them.

It should be readily apparent that a cohesive course design is desirable over a non-cohesive design: it puts student focus on the course content rather than on the course design. This is especially true with online courses. With campus courses, the student is reminded two or three times a week what is due and what the plan for the day might be. With online courses, especially taken by students attempting to balance work and family demands, this is much more difficult.

The question remains: how does one make a course cohesive? The answer is following a top-down design principle. Start with the big design decisions and gradually work down to the details. This is why my first questions to a campus course lead is “how does this course fit into the overall design of the degree program?” I start very high-level. From here the conversation goes to course outcomes, course content, assessment strategies, and so on. I make every effort to avoid discussions about individual assignments or tests until very late in the design process.
It is difficult to have a cohesive design for a class when the designer is always focused on the minutia.

Design Before You Build

No self-respecting aeronautical engineer would start to build an airplane without a complete and detailed set of plans. No self-respecting builder would start construction on a house without a complete set of blueprints. No self-respecting software engineer would start writing code without a specification and a design document. No self-respecting instructional designer would start work on a training module or a course without having a design in place. Each of these disciplines has their own name for this basic principle (such as “ADDIE” and “Waterfall”) but the design-before-you-build principle is consistent across these and many other disciplines.

When I started developing online courses, I thought the “Course Map” was a useless hurdle that I needed to check off before my course would pass the review process. With my own process in place, why should I need a new one? I have since repented. Today I believe the course map to be an indispensable tool to help me draft the course, to estimate student and instructor time commitments, and to specify instructional activities. In order to make this work, however, I needed to make two rather significant adjustments. First, my course designer made a Microsoft Word version of the course map from the original Excel file format. This proved much more streamlined and less problematic. Second, I added a few details in the weekly plan. These items are one-paragraph descriptions of each learning activity that will need to be built.

It takes one semester to build a course map. For a 3-credit course, I have a 3-credit leave to accomplish this task. Usually I sit in on the campus class for a semester to observe how the course is being taught. I do all the reading the students do, take notes in class, and complete the assignments. As I go through this process, I try to determine what needs to be adjusted to preserve the campus course lead’s intent. At the conclusion of the task, I make one of three recommendations to my department chair: 1) Yes I can build this course and it will take X credits to finish the job; 2) Yes this course can be built, but a task must be accomplished first; or 3) No the course cannot be built and these are the reasons. I assert that you simply cannot make these recommendations with any degree of accuracy without a fully specified course map. With the course map, however, it is possible to make very accurate estimates.

This principle, “Design before you build,” is contrary to the current recommendations for building online courses. The current plan calls for the design and build to occur during the same semester. There are several problems with this plan. First, it is impossible to make accurate estimates as to how long it will take to build the course. As a result, projects run past their deadlines, course leads are overworked, or quality suffers. Second, often a better way to do something is discovered midway through the project. When this inevitably happens, the design team is faced with three bad options: redo completed tasks, do not implement the new idea, or live with a disconnect in the middle of the class. This seldom happens when you design
before you build. As new ideas come in the design process, it is easy to go back and adjust previously-made plans because there is no real investment in the old ideas. Finally, it is more likely that the resulting course will be cohesive. Spending an entire semester designing a class using the course map facilitates this top-down design.

A cohesive course design is desirable over a non-cohesive design: it puts student focus on the course content rather than on the course design.

The development schedule I have been following for the past several years consists of the following: one semester of design, one semester of build, and one semester of self-pilot while the course goes through the review process, and one semester of online pilot. In order to complete an average of one course per semester, I am always working on four courses at a time. Last semester I designed cs 345, built cs 364, reviewed cs 432, and cs 416 went into pilot.

Have a Strong Course Council

It is rare that one individual possesses all the talents required to complete a large project. Furthermore, the most successful teams are those that consist of members with a diversity of talents. The trick is to assemble and organize teams so each member has the opportunity to contribute in the most effective way. Rather than discussing the different team organization options, we will focus on the way the Lord saw it fit to organize His church: councils. Quoting the handbook of instruction regarding ward councils:

During the meeting, the bishop explains each matter being considered, but he does not normally decide how to resolve the matter until he has heard the discussion. He encourages discussion without dominating it. He asks questions and may ask particular council members for their suggestions. He listens carefully before making a decision. These discussions should foster a spirit of inspiration.

There are a few things to notice here. First there is one individual who presides. In the case of a ward council, this is the bishop. In the case of the course council, this is the course lead. The course lead is ultimately responsible for the quality of the course and needs to answer to the needs of the various stakeholders (the department chair representing the needs of the program, the instructors, the students, and the online organization). The course lead may delegate some of the responsibilities of building or maintaining the course to other members of the council, but the stewardship remains in the hands of the course lead.

Second, everyone in the council has a voice even when the issue at hand lies outside the individual's area of expertise. The course lead needs to encourage this participation. When building a course, I look forward to bouncing ideas off the instructor or the designer on a weekly basis. They are familiar with the course and what we are trying to accomplish so their insights are very valuable to me.

Third, avoid the spirit of contention. Everyone should feel validated, and everyone's unique perspective should be given respect. This means the course lead, the course designer, the graphic designer, the copywriter, the content management expert, the instructors, and the content experts all are made to feel like equal and valued members of the team.

I have worked with many course councils through the years. In my experience, the best way to get one going is to hold a meeting with as many members as possible. Lay out the different tasks that need to be accomplished to get the course built or to make the necessary updates. These tasks may include:

- Identify objectives
- Create an assessment strategy
- Specify online or face-to-face pedagogy
- Author course documents
- Proof and copy-edit course documents
- Build the I-Learn site
- Organize and manage course assets
- Create a look and feel for the course
From this list, the course lead would delegate task to members of the council. Sometimes only one or two members could handle a task, other times it would require a sub-council. Many of these assignments may occur in predictable lines (such as the graphic designer being in charge of the look and feel of the course documents). Others may depend on the time, interest, and individual expertise of the council members. Once these preliminary assignments are made, we meet again a few weeks later to fine-tune the assignments.

Manage Technical Debt Carefully

This is perhaps the most difficult to explain but has the most far-reaching effect on the maintainability and quality of a course. I will begin with an analogy.

When my wife and I moved into our first house, we put the silverware in the silverware drawer and the dishes in the obvious cupboard. For the 4 years we lived in that house, we often commented how inefficient the kitchen seemed to be. You had to walk from one end of the kitchen to another to make anything! As we were preparing to move into our second house, my wife read a book on how to efficiently organize a kitchen. The next kitchen was much better! We then came to realize that the problem was not with the first kitchen, but with the way we organized it. Fast forward to today when I have several teenage daughters helping with the dishes. Suddenly our efficient kitchen became a nightmare because they put stuff away in the wrong locations. It takes a significant amount of searching to make anything!

Technical debt is the difference between doing something right and just throwing together a somewhat workable solution. It is the difference between putting the dishes back in the right spot rather than dumping them in the most convenient location. Technical debt is the accumulation of small inefficiencies that by themselves matter little but taken as a whole represent a significant hurdle to getting work done.

Technical debt manifests itself in designing and maintaining courses in several ways. Some examples of this include:

- **Naming files:** Does the name of the file completely describe what is contained therein and how the file is meant to be used?
- **Vocabulary:** Is there a single standard way to refer to a concept in the course? Is that word used consistently throughout the course? When one word could mean many things or when one thing could go by many words, it makes it difficult to maintain the course and difficult for the students to understand it.
- **Organizing files:** How hard is it to find the file you are looking for? What about the other members of the course council?
- **Instructions and assignment descriptions:** If the students are to do similar tasks in two or more assignments, are the instructions the same?

- **File formats:** How many different file formats are used (such as DOCX, PDF, XLS, PPTS, HTML, etc.)? Is the file format selection consistent across the site?

My wife teaches in a different department than I and was recently asked to help “organize the files” in a more logical way for a course. She quickly found a mess. There were several almost identical copies of the same file. There was no distinction between student-facing files, keys, instructions, content files, and other resources. There
was a collection of a dozen related assignments each with unrelated names or locations. In the end, it took her the better part of a day just to make heads or tails of the hundreds of files that were associated with the course. This is an example of out-of-control technical debt.

There are two things we can do to manage technical debt. The first is to discipline ourselves to always do the right thing when working on a course and avoid “quick and dirty” solutions. When adjusting the instructions on an assignment, ask yourself “is this the only place that needs this work?” When creating a new file, ask yourself “do I really need a new file,” “how does this file fit into the larger design of the course,” and “how do I create this file so its purpose is most clear?” The second suggestion is to be extremely consistent. Be consistent about the way things are worded, about how things are described, about how things are named, and where things are put. In other words, channel your obsessive-compulsive tendencies.

I would like to present one workable solution to this problem. I divide each of my 11 courses into 5 folders: Course, Notes, Prepare, Teach, and Ponder. The Course folder has all the documents related to the entirety of the course, not to a given lesson or learning activity. Examples include the syllabus, textbook resources, and things like that. The Notes folder contains all the instructor-facing documents. This includes lesson plans, keys, and grader instructions. The Prepare folder contains all the activities that are to be performed before class. The Teach folder contains all the classroom activities or the group-work activities for online courses. Finally, the Ponder folder contains all the activities that are to be performed after Teach. In my experience, this general layout is sufficiently generic that it can be applied to virtually all courses. Each file in these folders is also very intentionally named. The name consists of the course number, the week number, the activity type, and one or two words describing the activity. This means that the filename alone is sufficiently descriptive to be able to pinpoint where it goes if it gets separated from the rest of the course.

**Other Suggestions**

These four overarching principles can certainly streamline your course development and maintenance tasks. The following are a few other suggestions that may help:

**Choose Presentation file formats:** Use presentation file formats for student-facing documents and editing file formats for instructor documents. Presentation file formats include PDF for complex layout documents, HTML for documents that need to reflow on small form-factor devices, and JPG for images. Editing file formats include DOCX for text documents, PPTX for slides, XLSX for spreadsheets, and PSD for image files. If you give a student an editing file format, the student may have a very unpleasant experience when using OpenOffice, GoogleDocs, or Apple Pages/Numbers. Furthermore, the student will be asked to open a separate application to view the content.

**Focus on the course, not the technology:** Every new technology you use in a course requires student time and effort to master. If you do not like the discussion board feature in I-Learn, using a third party solution may seem like a good alternative. However, if every teacher followed this path, then the student would need to learn dozens of different technologies. Instead, only introduce a new technology when it is absolutely necessary.

**Use professional editing tools:** We all produce content as part of our job. It is generally worth our time to acquire the best tools and learn how to use them. While it may seem obvious that a graphic designer should learn to master Photoshop instead of Microsoft Paint, we often settle for inadequate tools when authoring our course sites. For example, content (such as assignment instructions) should be authored in Microsoft Word or Adobe Dreamweaver and not in the HTML editor built into D2L.

**Put your documents in Equella, not in the LMS:** It can be painful and time-consuming to make simple changes in D2L. This is especially true when large changes need to be
made in many course documents. When we changed the lesson organization scheme from “Lesson 00” to “Week 01”, I needed to change more than a thousand documents. This was accomplished in about 60 seconds because I could do a global search-and-replace and the updates were automatically uploaded to Equella. It would have taken more than a day if my content was in D2L.

Test to ensure quality: After any change is made to a course site, have a separate person verify your changes. It is amazing what a second pair of eyes will see that you have looked over.

Final Thoughts

Improving our development methodology pays dividends in many ways. It allows us to produce higher quality work with less effort. It allows us to get deeper in the subject matter without overwhelming the students. It also gives us peace of mind in knowing that we have exercised our stewardship to the best of our abilities. I encourage you to take a careful look at your practice and see what steps you can take today to make your course development activities more streamlined.
In 2008 we were encouraged as a faculty to create an Anatomy and Physiology course online. Inspired by the talks of Elder David Bednar and then President Kim Clark, we were motivated to try and serve more students. However, as the work began it quickly became apparent how truly daunting the task would be. Thus, to help ease the transition, we moved in the direction of a publishing company. The publishing company was enticing because of two major reasons: 1) they had already established online content, and 2) they had encouraging claims about learning success in the online environment. Additional bonus items included an enormous list of figures, pre-written test and quiz questions, and an online cadaver dissection program. Less important, but still persuasive were the bells and whistles: the flights out to their company, the nice dinners, and the flattering feedback that made us feel important. We worked many long hours integrating their existing course content with the BYU–Idaho learning systems. During the integration process, they were more than happy to offer our students various discounts. In contrast, once they became fully integrated into our system they started to raise prices and take away certain bonus material unless we paid for them. Following an inspired talk by President Clark about lowering the cost of education by creating our own materials, we began to imagine that we could create our own material and make it free of charge to the students. However, the work involved to author all of our own written and digital media made us weak in the knees and we oscillated back and forth as to whether we should do it. The online course was getting good reviews by the students (course evaluations) and the teachers (ease of interaction and usability), and it seemed to be flowing seamlessly. Thus, based on this feedback, we justified the cost (>\$180.00/student) and allowed the course to continue.

The deciding factor finally occurred when we started to hear rumors that some programs were not accepting online courses as acceptable prerequisites because they were not equivalent to face to face courses. Some schools began to post in their catalog that online Anatomy and Physiology would *not* be accepted. We began to wonder if our online course...
Anatomy and Physiology course was adequate. We wondered if we would be able to provide any convincing evidence that would help a student with a successful petition if they needed to convince an admissions committee of their qualifications. We asked questions like, how can we determine if the course is adequate? How can we improve it if it’s not? We initially attempted many different types of informal assessments as well as surveys but quickly realized that the two groups were just not statistically comparable. We did however realize that since the courses used the same objectives, we could give both groups a standardized, comprehensive exam and compare the learning gains. The exam was modeled after the HAPS (Human Anatomy Physiology Society) national exam. The results were more than alarming as shown in figure 1.

![Figure 1. Comparison between face to face (FF) and online (OL) exam averages.](image)

The data suggested that the online students were indeed struggling. This presented some immediate problems. For one, our face to face courses had traditionally used a curve that was based on highest scores. Thus an A in the online course was equivalent to a C in the face to face course. Since this course was used as a pre-requisite to so many programs, this was a serious issue. We needed to find a way to bring the online students more in line with the face to face students. This brought to our attention immediate and grave concerns. Because the publishing company was so integrated into our online course, we realized how much our hands were tied if we wanted to make very substantive changes such as swapping, changing, and/or substituting foundational content.

We determined that if we were going to invest the time and energy needed to create a new online course that we would be sure to create a system where the two groups could be statistically compared. In addition, we needed a way to ensure that the online students were just as prepared as the campus students, and more importantly, we needed to be able to prove it! Writing our own textbook was not a walk in the park. This article is not the place to discuss all the un-pleasantries, but a brief synopsis is included below.

We estimate the total cost of the project to be around $100,000. A brief breakdown is as follows: Two full time Faculty Sabbaticals and 6 formalized 3 credit professional leaves (umbers are approximations). ($25,000/sabbatical x 2; $10,000/3 credit x 6), several hundred hours of informal faculty time, 4,000 hours in student employee work ($32,000).

The project thus far has resulted in: 5,000 images, figures and illustrations, 5,000 practice questions, quiz items, and test items, 40 hours of video, ~50 animations, various interactive web pages and guided case scenarios, two complete E-books, and two complete lab manuals. We estimate the total savings (conservatively) at $350,000 per year for our students.

After all this investment, we needed to address the question of compared performance again. But this time we were more confident that we were comparing apples to apples so to speak because we knew that the online and face to face courses followed the same schedule, read the same text, saw the same pictures, did the same practice quizzes, completed the same assignments, and took the same exams. We re-administered our key assessment (final comprehensive exam) and discovered very little change. The online and face to face students continued to have a very similar gap in exam scores. However, we now had full control over all the resources and thus we were able to start initiating changes and analyzing outcomes.

We have also been able to get very granular in our efforts to see where students were struggling and then modify specific writing, or add focused lecture videos and figures to help. Because of our common design, the online course also began to drive what we did in the campus course. For
We needed a way to ensure that the online students were just as prepared as the campus students, and more importantly, we needed to be able to prove it!

e.g., the online improvement team created written transcripts for all of our videos (something we face to face lecturers never considered doing). Now our face to face students are printing these out and incorporating them into their notes for class. This has helped a lot of face to face students. Having the courses exactly the same for the face to face and online students allows us to make a change, track the progress, and then adjust for the best outcome.

Additionally, we were able to include the online faculty in more of our decision making process and content creation. We even gave them some flexibility in delivery strategy and teaching approaches. It is worth noting what we mean by “giving online teachers more flexibility.” This idea was initially very unpopular as experience has taught us that removing the reigns from a tightly controlled course can result in a rapid decline of consistency, organization, and even quality in an online course. On the other hand, our online teachers frequently complained that they wanted to teach. It was hard to know what to say to these highly trained professionals (we had Pharmacists, highly valued Physicians and respected professors signing up to be online instructors). These online colleagues of ours were complaining that they felt like button pushers, automatons, e-mail factories, and discussion board moderators. We felt bad because some of these individuals didn’t need the money but really wanted to just mentor and teach LDS students. It was a slow process, but we were able to provide some portions of freedoms for our online teachers to try some of their own assignments and pedagogy. It should be noted that they still followed all the same schedules, objectives, readings, quizzes and exams as the face to face instructors. Also, the face to face instructors were given the exact same portion of the freedoms allowed to them to allocate for their own strategies. Interestingly, since we collect data on performance all the time, we started seeing a lot of discussion on whose ideas seem to be working the best.

The online instructors became part of those discussions which we feel has created a very healthy relationship. As evidence, we are happy to report that as of Spring Semester, 2016, the face to face and online sections are equivalent for the first time in terms of common exams as illustrated in figure 4. We feel that our attempts to make evidence based decisions has really been important in our progress.

Ironically, our course evaluations dropped for the online sections even as performance increased. We suspect this has something to do with grades since the curve is now identical for all sections (online and face to face). This observation has also taught us that course changes and adjustments need to be made in response to data obtained from multiple sources (i.e., course outcomes, common assessment data, and final grade distribution). Adjusting a course based on only one type of assessment data could prove disastrous (figure 1). Our lower course evaluations for online sections is something we are concerned about and are currently looking into because the campus students still have a very positive outlook towards the class and the classes are identical, with the exception of an in class instructor. In addition, we have seen the following “surprise” results that most likely would not have occurred.
had we not started the process of common content and schedule between face to face and online.

1. **Consistency** The same content and schedule format drives an environment where exam averages are very equivalent, suggesting to us that the course is very close to the same regardless who teaches it. This has not always been the case in the past where some sections would show greater than 60% of grades in the A range and other sections as low as 12%. Now, if an exam “curve” is justified, we are able to set a curve that is the same for every section, including online sections. Thus, everyone is being graded equally and fairly. This is helping to ease concern in local programs who want to know that the online students are equally qualified and we can present this data to help a student petition if necessary.

2. **Leverage of Resources** Because of the consistency, we have many contributors that edit and update content on a regular basis. Even some of our online instructors have added enormous value. One teacher submitted 800+ practice questions that we all can use!

3. **Open Labs** Because of the consistency, a program was started that we call open lab. We have a room reserved every day of the week from 5:00 pm to 7:00 pm where students sign up as volunteer tutors and tutor each other. It doesn’t matter who the teacher is because everything is consistent. It is not uncommon to find over 100 students in the open lab. We are now almost ready to open the lab to our online students through skype.

4. **Tutor Center (Online and Face to Face)** Prior to our common course content and schedule, the tutor center had to find tutors specific to the teacher. Most textbooks for this subject are over 1500 pages, making it impossible to cover all the material. Thus each teacher would choose various things to cover and write their own exams, making it almost impossible to tutor for other teachers. Now, the tutors can be hired and can tutor any student, including online students.

5. **Sharing of Students** It is not uncommon for students to study with other students in a different section. It is also not uncommon for students to attend other lectures from other teachers when they need to make up a day or hear material again. It is not uncommon to have any student from any section stop in with any professor and talk about material. It is not uncommon for a campus online student to study with a campus face to face student. Recently we have started the “pen pal” program where campus Anatomy and Physiology students volunteer to be paired up with an online Anatomy and Physiology student and communicate via e-mail or other avenues to discuss concepts. This has created a very strong learning culture.

6. **Real-Time Updates** As errors are found or new information made available, we are able to update the courses immediately.

7. **Collaboration Between Colleagues** We have begun a new type of collaboration where others are signing up to contribute content. Other professors are asking learning questions, testing the results and then comparing results with others. Our efforts are becoming biased towards an evidence based method of teaching and learning. In addition to our own Anatomy and Physiology group, other groups, such as Biology Education and Horticulture have teamed up with us to test their own discipline specific ideas. For example, during the fall semester of 2016, half of the Anatomy and Physiology sections will contain live plants to test the influence of plants on the learning environment. This test is being run by the Horticulture department. This is possible because, in addition to consistency, our courses also allow for very large sample sizes. This would have been impossible had we not gone to a common content and schedule.

Course changes and adjustments need to be made in response to data obtained from multiple sources… Adjusting a course based on only one type of assessment data could prove disastrous.
8. Data Driven Decisions (Administration etc.)
Decisions are now more likely to be made because we have shown that additions/suggestions work, not just because we “feel” they would work.

Perhaps most important, is the fact that we as faculty are beginning to see that we actually can impact the lives of thousands. We had heard this before but it seemed to resonate only as a nice thought. However, now when a faculty member creates something to improve learning and all the sections use it, including online, there is real and tangible proof that we really did help thousands. It is also satisfying that we save our students so much money. All is free, completely free of cost to our students. Is the system perfect? No, we have errors that we find every day, but, we are working out those errors and enjoy finding evidence to support our progress. We find it fascinating that we have come full circle. Without the encouragement to produce an online course we may have never found these “gold nuggets” of learning. As a Faculty body with regard to the Anatomy and Physiology courses, we don't talk about face to face and online as separate entities, we talk about the students and what benefits them. ♦
“But, behold, I say unto you, that you must study it out in your mind; then you must ask me if it be right, and if it is right I will cause that your bosom shall burn within you; therefore, you shall feel that it is right” (D&C 9:8).

As teachers, we have many ways to “study it out in your mind.” A group of teachers could share anecdotal evidence of their experiences which can provide insights. Fellow teachers can observe and provide valuable feedback for improvement. One of the most effective ways to “study it out in your mind” is to collect and analyze data. Teachers can collect and analyze data in many different ways, but each teacher should consider three general principles when gathering data: 1) determine what questions you want to address, 2) collect and analyze the type of data that would be most appropriate to answer those questions, 3) continually improve the class with data as well as improve the data collection/analyzing process.

To illustrate this process, I will share what the Introductory Statistics team did to follow these three principles of data analysis to help improve our courses.

**Determine the Questions to Address**

Finding the right questions may seem pretty straightforward, but in fact, quite often it is not. Teachers do not have all of the answers at the beginning. Our team tried to come up with the best possible questions and then address them. The key for us was to be unified as a team to decide the questions to address.

After some reflecting, our team wanted to compare the different modalities and the different type of statistics classes. With the introductory statistics classes, our group teaches on campus and online students (the two modalities), plus three different types of introductory statistics classes: Business Statistics, Biostatistics, and Social Science statistics. Our team was concerned about the following: 1) overall attitudes of the courses, 2) test performance, 3) aspects of the course which worked well with students. You may have different concerns that you want to address. However, the key for us was to be unified as a team to decide the questions to address. There were still some feelings of uncertainty, but we decided to move forward with these questions hoping that more questions will emerge after we address these questions first.

**Collecting the Data**

When collecting and analyzing the data, the group tried its best to tie the data to the questions. To evaluate the questions for the introductory statistics class, our team reviewed three different types of performance/attitude data.

First, we analyzed university course evaluation results. The data for this study included semesters since we made a change of having a unified curriculum and exam for all sections, which was Winter Semester 2013 for campus and Fall Semester 2013 for online.

Second, students took a survey during the Spring Semester 2016. They answered the question, “How useful do you think statistics is now?” at the beginning and the end of the semester to assess overall changes in attitudes concerning statistics. Students also answered questions in the survey concerning certain aspects of the course, such as TAs, teachers, videos, and the online textbook.

Third, our team analyzed all four units of test data which were common across all campus and online classes from Spring Semester 2016 to evaluate student performance. It is important to point out that we received permission from
the Institutional Research Board (IRB) to use the attitude data and test data for this semester.

We believed that the course evaluation data, attitude survey data, and exam scores would help us address the attitude and performance questions we had between campus and online classes, as well as between the three different types of statistics classes.

Analyzing the Data

The following are summaries of the results and reflect a general finding our group saw in each of the three types of data.

Overall Course Ratings – Course Evaluations

Based on the overall course ratings (Figure 1), our team found: 1) the average campus ratings are higher than online ratings, 2) the Business online classes on average are lower than the other online classes and much lower than all the campus classes, and 3) course and modality have a significant interaction (rating on a scale from 1 to 7). An interaction is where the difference in mean scores between campus and online classes changes across the three different types of courses. The interaction here is evident by the two non-parallel lines in Figure 1 which are primarily due to the low mean for the Business Statistics online classes.

Our team concluded three items for video usefulness ratings (Figure 2): 1) online students found videos to be significantly more useful than campus students, 2) type of class is significant for videos usefulness, where Biostatistics had the highest average, and 3) a possible (but not significant) interaction exists between course and modality for video usefulness. Our team found similar results in the attitudes of the online textbook.

Our group concluded three items for TA usefulness ratings (Figure 3): 1) Campus students rate TAs significantly higher than online students, 2) Business statistics students have a significantly higher rating for TAs than students in other courses, and 3) a possible (but not significant) interaction exists between course and modality.
where wider gaps between campus and online came from Biostatistics and Social Science Statistics. We also found similar results when students evaluated their teachers.

**Overall Attitude – Attitude Survey**

Also, in the attitude survey, we asked the following question: “How useful do you think statistics is now?” at the beginning and end of the semester. When we compared the results from the beginning and the end of the semester, we found there was no change in overall attitude. It was disappointing to discover no improvement in overall attitudes, but we also wondered, if we needed to improve on the type of question we ask to assess specific attitudes of the students rather than a general attitude.

**Exam 4 Scores - Performance**

With the test data from exam 4 or the final exam (Figure 4), our team concluded the following: 1) modality was significant for Test 4, 2) course title was not significant for Test 4, and 3) though the interaction was not significant, wider gaps exist between campus and online courses for Biostatistics and Business Statistics.

From our first round of data collection and analysis, the Introductory Statistics Team learned a few key lessons. First, compared to campus classes, the online statistics students were unhappy with the course. The campus Business statistics classes were similar to the other campus statistics class, but the Business online statistics class was much lower than the other online statistics class. Second, online students appreciated videos and the online textbook more and campus students appreciated TAs and teachers more. Third, a wider gap exists between campus and online test scores for Business Statistics and Biostatistics. Lastly, our group learned we should be collecting data on specific aspects of student attitudes rather than just general attitudes at the beginning and end of the semester.

**Continually Improve the Course**

The beauty of ongoing data collection helps us to do two things: 1) determine the action items to help improve the course and, 2) help us assess the type of data that we are collecting and determine any changes. Now that we have made conclusions from our initial results, the next step is to determine any future action items to help us improve the course. For our group, we will more closely assess the attitudes for the online students, particularly the online Business statistics students. We can survey some of the online Business statistics students to get a better understanding of some of their discontentment. We have been and will continue to work with the Business department to help us understand what we can do for the online Business statistics student. Also, we need to evaluate some possible methods to improve the performance of the online statistics classes, particularly the Business Statistics and Biostatistics classes.

We have found that online students do not rate their TAs and teachers as well as campus students on average. Looking for ways to help improve the online interactions between the students and their teachers/TAs can help in that regard.

Finally, we should ask for specific questions on attitude rather than the general question, “How useful do you think statistics is now?” This is an example of what we can do to tweak and help improve the data collection process. This is similar to the analogy Elder Holland gave when he and his son were traveling on the road. They came to the fork in the road and didn’t know where to go. They prayed and both had the same impression to “Go to the right.” They did so and shortly after, they hit a dead end. They turned around and took the left at the fork to make it home. Elder Holland suggests that he and his son were prompted to go one direction and reach a dead end so that they would know that at least the way they originally traveled was not the correct way to go. This is analogous to our data collection experience as teachers. We discovered one way
We discovered one way to measure and analyze data produced a “dead end”, and by “turning around,” we can possibly evaluate other ways to measure attitudes of the courses.

Conclusion
Analyzing and reviewing data should be an ongoing process to help improve what we as teachers do and it should be a part of the teaching experience. Our team discovered the data gathering and analyzing process at first takes time. After doing it the first time, it is a matter of tweaking and improving the process. This is similar to teaching a course for the first time and then making minor changes afterward. Data collecting and analyzing is an evolving process. You make new discoveries every time you evaluate data.

Every semester, new questions will arise that can be measured by collecting and analyzing data. As the Introductory Statistics team continually works on this process, these statistics classes will persist on a “steady, upward course” through continual improvement by collecting and analyzing data. ♦
The mission of BYU-Idaho is to prepare “students for lifelong learning, for employment, and for their roles as citizens and parents.” Lifelong learning, as the name implies, is developed over years of study and application, and continues on well after graduation. It is nurtured through multiple interactions and moments that encourage curiosity and discovery. What we as educators aim to do is more than simply provide students with success at a job interview, but the tools that help them become independent learners and thinkers in their everyday activities, regardless of background or desired profession.

In an age where information far exceeds our ability to critically think about information, deep learning is essential. Rather than leave students to interpret the overabundance of available information, we must teach the skills necessary to evaluate that information. As we’ve observed, understanding reliable information is not given, it’s learned. Further, a student who searches the Internet may retrieve information that answers a question at that moment, but has the shallow dip into the topic encouraged that individual to internalize or deepen understanding of the specific topic based on the information found? Going deeper requires more effort, from locating information to synthesizing it to ultimately applying it. We want to move students beyond being mere consumers of information.

The ability to learn deeply is greatly enhanced when students are forced to wrestle with complexities presented by primary sources and rare materials. Students can engage with such materials in Special Collections through interactions with original letters, a handwritten Bible, or smelling and touching ink as they print using the Iron Acorn Press. Physically interacting with information engages multiple senses to enable a deeper understanding. We often see students as they experience surprise and delight when they pick up a sixteenth century book of sermons riddled with worm holes, or discover the personal toll of the Great Depression on Rexburg through Mayor Arthur Porter’s personal letters. Understanding can climb exponentially when the senses of touch, smell, and hearing are added to the single sense of vision. These
moments often force students to rethink their own understanding and biases.

Lifelong learning is easily related to critical thinking and deep learning. Michael Scriven and Richard Paul of the Center for Critical Thinking define critical thinking as “the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action.” Whether termed critical thinking or deep learning, the desired outcome for students is similar. As one archivist in a similar study noted, “critical thinking is ‘context bound,’” meaning students need to think about something tangible. What better way to develop the ability to critically judge and understand information than to introduce these ideas hands-on in a laboratory experience.

Deep learning often involves hands-on involvement with ideas or articles. Classes in the natural and physical sciences almost always involve a laboratory experience. The classroom typically introduces the theory and findings of other researchers—i.e., what science is all about. But it’s the total physical involvement in the laboratory that teaches what science is. The next and final step to actual incorporation of that deep learning is to have the student teach the concept to others. This completes the “teach a person to fish” process and the BYU–Idaho Learning Model.

What is it about the special collections area in a university library or museum that enables it to be a laboratory experience that can reach students in nearly any field of study? With a student audience that is increasingly unaware of where milk comes from, do they have a good hold on the idea of how information was stored and shared before they received their daily feedings of information from a screen? Certainly it is not essential to understand every mechanical component of an automobile or a smart phone to be able to utilize it. But having a tangible interaction with some of those components and their evolution over time aids immeasurably in appreciation and application of those technological wonders.

Like other repositories around the country, BYU–Idaho’s Special Collections & Archives contain materials not normally found in the library stacks. These materials might be rare or one of a kind, or monetarily valuable, or require special handling due to an aging or fragile condition. Materials can be in almost any format, although typically they started out as a tangible format: a handwritten manuscript, a printed volume, a video or sound recording on a wide variety of media, an artifact or piece of realia. Due to their very nature, these materials may only be used inside the Special Collections reading room. The materials are brought out to the requesting patron, and patrons agree to specific guidelines while handling the materials.

Significant efforts are being made worldwide to digitize many items in archives and special collections. Benefits of these efforts include the fact that it provides greater access to patrons who could never possibly travel to the geographical location where they’re housed. Digitization can also relieve the stress placed on items when they are physically handled. Much information can be gleaned from a high-resolution scan, including from new 3D virtual models on objects that can be generated via software.

Archivists and special collections librarians are in an ideal position to teach students how to understand and use primary sources. Skills such as an understanding of writing styles, material formats, or historical processes can be introduced by those who do such work daily. A deeper grasp of provenance and original order—knowledge
rarely gained by many researchers and often only through happenstance by an entrepreneurial student—can be understood early in a student’s academic career through interactions with archivists.

Using primary sources in instruction have the larger benefit of developing critical thinking skills. Examples include the traditional show and tell in a single session, a series of class sessions in the archives, workshops catered to specific needs or disciplines, and full courses on the various aspects of primary sources and rare materials. While each method can be effective, repeated interactions early in an academic career prove to be the most beneficial to developing a student’s ability to constructively use primary sources and be better enabled to make connections in research. These case studies also demonstrate the importance of faculty collaboration and the ability of such exercises to develop critical thinking skills in students.

A particular laboratory experience in the BYU–Idaho’s Special Collections & Archives often involves a first generation Kindle e-reader. The first Kindle was brought to market in 2007, but it already looks so aged that few students are even able to recognize what it is. We explain that the library excitedly purchased this Kindle when it first came out because it could hold “up to 50 e-books” and was extremely portable. Unfortunately for us, 365 days after we acquired this Kindle, the screen froze, rendering it completely useless. Because of its light weight, the device is not even useful as a doorknob; at best it can function not as a replacement to paper, but as a paper weight.

Contrast the Kindle 1.0 with our cuneiform cone created during the reign of Gudea of the ancient city-state Lagash. Gudea reigned from 2144 BC to 2124 BC. The cuneiform writing—one of the earliest writing systems—is clearly legible on this piece of hardened clay after more than 4,000 years. We discuss how digital information is certainly convenient, and typically easily transferred, but in our case the digital information “disappeared” after one year, whereas the writing on the cuneiform cone is as clear as the day the wedge-shaped instrument was impressed on the wet clay. We then discuss challenges and necessity of preserving digital information. No amount of reading about this issue on a digital screen can come close to the hands-on, compare-and-contrast experience.

Additional courses have sought out a lab experience using the Iron Acorn Press, our working Grandin Press replica, a near exact copy of the press that printed the first edition of the Book of Mormon. Having a working press is quite unique as you are only able to see and not use the press in Palmyra or at the Church History Museum in Salt Lake City. Courses from the Arts, Humanities, History, English, and Religion have taken advantage of the opportunity of a tactile learning experience. Courses studying the Book of Mormon get a hands-on experience with the press that printed the original edition in 1830, connecting them directly to the artifacts and processes they’ve studied. Such interactions enable students to further connect the role of writing and printing to society, and how our ability share or access information has evolved.

Additionally, we’ve worked with faculty to develop more specific presentations and exercises using the materials in our care. These experiences have, we believe, been overall enjoyable and enlightening.
for the students (and admittedly, us). Working with faculty members has enabled us to use materials outside of the traditional show and tell, and fostered an environment where levels of engagement are much stronger. It enhances our ability to use active learning techniques such as inquiry-based learning with objects from the collection. In these scenarios, we've put students in the role of inquirer or curator and encouraged them to answer set questions or fulfill a certain assignment. While the materials are often chosen for students, given certain parameters they need to follow, the outcome is often up to their creativity. In this way, we hope to teach them how to think, not what to think.

In one example, we've partnered with a faculty member in the Music Department in the course MUSIC 301: Music Literature 1, the first course in a three-part music history curriculum for music majors. Students in this course learn about music from the Middle Ages, Renaissance, and Baroque periods, and much of the early music they encounter is often foreign to them. Students come to Special Collections for one class period with the professor after having learned about early music and its development into a written style. In the reading room, surrounded by items contemporary to the period, we discuss the development of writing and show a leaf of an Antiphoner, a Gregorian Chant on vellum. Students must then study our leaf and a selection of similar pieces of music that have been digitized by libraries around the world to determine if they can identify facts about the leaf in detail. Students connect the abstract ideas they’ve learned to an actual physical artifact they can see and feel, encouraging the development of deep thinking.

In another example, a faculty member approached us about a documentary editing project for his editing course. He wanted to give students real-life experiences with various aspects of the editing trade. Students learned about compiling and editing primary source materials, similar to projects like The Papers of George Washington or the current Joseph Smith Papers project. After we selected the potential collections that could be used, the class visited Special Collections where we introduced them to archives and primary sources, and discussed the role of such materials on society. Student groups choose a collection and make return visits on their own to examine the materials in person. We also digitized the items to make them readily available to students.

One group edited the missionary journal of George Godfrey, who served in Great Britain starting in 1891. In the process of researching, the group uncovered certain details that placed the journal into a wider historical context. It also encouraged the students to take a deeper look at the journal, changing the traditional research process by starting out with a specific, unique resource. They edited the first few pages of the journal, producing a

Repeated interactions early in an academic career prove to be the most beneficial to developing a student’s ability to constructively use primary sources and be better enabled to make connections in research.
documentary edited compilation and provided us with a copy. Such work will enable future researchers with much more information than they would have had looking at the journal alone. Their project has been stored in Equella and made available to interested patrons. You can find it at this web address:

https://content.byui.edu/items/bcdb4d21-aa87-46af-a25d-623a6d4d77fb/1/

We can point to other courses that have visited Special Collections for a lab experience, but the goal is often the same: provide students with a hands-on experience that will encourage them to think deeper and connect their understanding of information to a larger narrative. Learning with physical objects will be an unforgettable experience for many students. Whether a show and tell featuring the history of recordkeeping, a discussion of the history of the Bible, history of Mormon printing or hymns, or a closer examination of using our local history or campus archives, we’re open to ideas presented by faculty that will engage students with unique materials. Many of the examples here were presented to us by faculty who asked. If you’re not familiar with some of the prominent items from our vault collection, just ask. Or, if you want to explore other ideas, let us know and we’ll work together. Many other leaves, volumes, artefacts, and various primary sources are viewed and studied by classes in departments as disparate as Religion, Art, Communications, Foreign Language, English, Theatre, and Music. With some creativity and consideration, many of the materials could be utilized in ways we have yet to see in other disciplines, and we strongly believe will enrich and deepen the learning experience for your students.


It’s worth noting that Eilean Hooper-Greenhill, a professor of Museum Studies at the University of Leicester, studied the idea of Object Based learning from a museum standpoint and found that handling and talking about objects promotes recall rates as high as 90% as compared with reading (10%), hearing (20%), watching (30%), and discussing (70%). See Eilean Hooper-Greenhill, Museums and Their Visitors (New York: Taylor & Francis, 2004), 144-5.

Our notable items include manuscript Vulgate Bibles hand-written on parchment in the 1200s, a leaf from an original Gutenberg Bible, a first edition King James Bible, and an 1830 first edition copy of the Book of Mormon.
<table>
<thead>
<tr>
<th>COLLECTION (NO. OF ITEMS)</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCHIVES AND MANUSCRIPTS (1,000’S)</td>
<td>Includes university archives, biographies of people from the local area, Digitized issues of newspapers from southern Idaho, local photographs, and oral histories (including Teton Dam flood victims, women’s history, Japanese Americans). Some collections may have restricted access.</td>
</tr>
<tr>
<td>CAMPUS AUTHORS (270)</td>
<td>Published monographs which document publishing efforts of faculty and staff.</td>
</tr>
<tr>
<td>CAXTON PRESS (707)</td>
<td>Books published by Idaho publishing house Caxton Press, especially those dealing with Idaho and local history.</td>
</tr>
<tr>
<td>EDUCATION (69)</td>
<td>Printed readers and textbooks designed for the purpose of pedagogical study.</td>
</tr>
<tr>
<td>GREATER YELLOWSTONE ECOSYSTEM (433)</td>
<td>Works that document the natural and human history of the ecological region with particular emphasis on the region known as Yellowstone National Park and Grand Teton National Park.</td>
</tr>
<tr>
<td>HINCKLEY MUSIC COLLECTION (111)</td>
<td>Books on the history of hymns collected by Thomas Hinckley.</td>
</tr>
<tr>
<td>HISTORICAL LITERATURE AND REFERENCE (481)</td>
<td>Printed works that represent historical literature, predominantly in English, from and about parts of the world.</td>
</tr>
<tr>
<td>MORMON COLLECTION (1,105)</td>
<td>Printed works that selectively represent important leaders, members, authors, and scholars.</td>
</tr>
<tr>
<td>MUSIC (100)</td>
<td>Printed works that document the history of LDS hymns and the development of music education.</td>
</tr>
<tr>
<td>PRINTING REFERENCE (31)</td>
<td>Books on mechanical and historical aspects of printing; supports the Acorn Printing Press.</td>
</tr>
<tr>
<td>SCRIPTURES (169)</td>
<td>Selectively represents important editions or types of the standard works. It also contains liturgical texts.</td>
</tr>
<tr>
<td>UPPER SNAKE RIVER VALLEY (1,700)</td>
<td>Printed works that document the history, politics, and people in the region.</td>
</tr>
<tr>
<td>VARDIS FISHER (117)</td>
<td>Books by and about Idaho author Vardis Fisher.</td>
</tr>
<tr>
<td>VAULT (~200)</td>
<td>The History of Printing (relics, manuscripts, individual printed or manuscript leaves, early printed books and Bibles).</td>
</tr>
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A medieval art class holds an open house in Special Collections after developing an exhibit as part of a final project.
The Class Business

SPENCER HAACKE
Academic Support Centers

As a student at Ricks College in 1999, I took an introductory literature class from Kendall Grant. He started the first day of class not with an introduction but by instructing us to follow him. He led us to the Hart building, where he asked us to obtain swimming suits, change into them in the locker rooms, and meet him by the pool. As I did so, I wondered what I had gotten myself into.

At the pool, Brother Grant was holding a laminated copy of “Fish in an Aquarium.” After instructing us to get in the water, he read us the poem. He then told us that if we really wanted to learn in the course, we needed to swim—in other words, get out of our comfort zones. As I considered his lesson, I realized that my involvement was key to my learning. I took that challenge seriously and became a leader in the class as I took projects and preparation to a higher level than I would have if I had not been challenged by Brother Grant.

Today, I am a course instructor and am responsible for helping students “swim”—that is, invest in what they’re learning. I’ve used a checklist style of teaching in the past that can cause courses to feel stagnant; today, I use another structure that can help students think differently about what they’re doing at BYU–Idaho and about the priority they’re giving their education.

Perception Change

I begin by asking students to evaluate their perceptions of a university course and identify their roles and responsibilities within it. How are they able to balance all of the things they are asked to do? I allow them to discuss these questions with their classmates. I then introduce a new way of thinking about school by asking additional questions: What will life be like after they graduate? What are the similarities and differences between work and school? As students share, I write their thoughts on the whiteboard. The conversation typically involves accountability, deadlines, and possible punishments for failing to complete assignments.

I then announce that their experience in the class will mirror a business structure. They will be required to accomplish tasks by a deadline with little or no reminders. I tell them that they are to organize themselves and create their own checklists.

I then introduce the concept of “payment” for their work, attendance, and preparation. I explain that they will be paid in “Haacke Bucks” according to the tasks, reports, and presentations they accomplish at a professional level. I tell students that they need to earn a certain amount of money by the end of the semester in order to purchase their A.

Students typically have mixed feelings at this point in the discussion, but as their questions are answered, they often express excitement; their perceptions have changed, and they start thinking about their assignments and grades differently than they have in the past.

To conclude the first day of class, I distribute employee handbooks (the equivalent of the syllabus) and introduce the contract.

The Contract

Contracts are often new and intimidating to students, so I walk them through it and assure them that they will not be held responsible for anything that is not in the contract. In other words, the class—our business—involves no tricks or surprises. The contract is set up to clearly define students’ roles and tasks as well as the rules of the class. I let them know that they will have time to read the handbook and negotiate their contracts’ terms, but once each contract is signed, there will be no further negotiations. Each student has a contract tailored to his
or her needs and desires. This usually results in each student having different earning potential as well.

Students often have a number of questions and may feel overwhelmed by the new perspective, which causes change in the way they view the teacher-student relationship. I ask them to think of me not as a teacher, but as a boss. In addition, the students think of themselves as employees. While this is not literally the case, the mentality of the classroom changes. They have more control over their desired outcomes. It becomes a “chose your own adventure” class.

The Negotiation

Before contracts are signed, a one-on-one interview is set up for each employee with their boss. Each interview is no longer than 20 minutes. I require Students to come prepared, having read the employee handbook, to negotiate their contracts. Within the handbook, there are a number of required items to do at the Boss’s prerogative, but there are other items they can choose to do. These tasks are accomplished in order to earn more money to purchase grades. They are supposed to come to interviews with plans for what they want to do, and then negotiations start.

As employees reveal tasks that they want to do and those they are willing to do, the amount of money they can potentially earn is clearly stated. Upon agreement, the employee signs the contract. The student then plan their upcoming days according to this contract. They set the due dates for their tasks themselves as they begin to work through their contract and deadlines to earn money. The boss will never call for the assignment or task until the deadline has been reached.

Board Meetings

Classes are no longer classes; they are board meetings. The employees come to board meetings ready with their tasks or meeting agenda items. The discussion begins with employees presenting ideas and expressing their opinions or their research. There are times that tasks are due during the board meeting, and I give them time to present those tasks to their coworkers and boss. The boss pays them according to the work they have done and their attendance at board meetings.

Earning your Grade

Students are “paid” for everything they do in the business. This includes attendance and participation. They will receive compensation for things they negotiated on their contracts, and they fill out weekly reports. Some of those weekly reports may include devotional attendance and reporting or other presentations like TED talks or self-made speaking service.

I require some presentations and activities for students to do as part of the business. These are things that, as their boss, I want each employee to experience, and I compensate them accordingly. For example, I require group presentations in the form of debates. Students are compensated for their preparation, presentation, and performance regardless of who wins these debates. Another mandatory project is the TED talks event. This is the main event of the business, and everything builds up to this. This
is discussed in many of our board meetings and worked on from the beginning of their employment.

It is important to note at this time that each employee is also given a job in the center according to what each would like to do for a career. These jobs range from photographer to event planner. Each student understands the parameter of this job and each can get started on it as soon as he or she likes. Each completed project is compensated according to how much estimated time it should take. Often, the projects are of high quality because it is something students want to do. I tie most of the jobs to the TED talk days, so it becomes a special day and not just another speech day.

In addition to mandatory activities, there are optional activities that each employee picks as a way to shape their class experience. Employees can choose activities to pad their portfolios according to their majors or emphases. Each activity is designed to give them experience in something they may do in the future or that they have a passion for. Some of those activities are problem/solution presentations, YouTube presentations (filming and editing), teaching, press releases, and advertising campaigns. I try to make this as student-oriented as possible so students feel it is not a waste of time and is something they are excited to do.

Pay Stubs

A weekly paystub is a reoccurring account of what students have earned with feedback according to their projects. They can then adjust their projects as needed to ensure they earn the highest possible income. These reports include feedback from the employer with the amount of their compensation, which comes in the form of a performance review. Employees will provide feedback on their projects themselves so they can track their progress. All of this feedback and information is collected and then used in a rubric for their final project, the TED talk. Each rubric fits the needs and progress of each employee (student) so he or she sees individual growth and not comparisons to others in the business (class).

Purchase Grade

As mentioned before, I require employees to earn a predetermined amount in order to purchase A’s. They can overshoot possible earning with projects and presentations, which is encouraged, as they will not likely earn the full potential of each project. Many students shoot beyond the mark so they can ensure they can purchase their A at the end of the semester. I caution, however, that each project needs to be completed to the best of their abilities and that if there is work not fit for the business, they can be docked in pay or fined. This dock in pay discourages students from signing up for as many projects as possible only to accomplish the projects with subpar work.

Fines

If the employer’s expectations are not met, then it is naturally reflected on the employee’s pay. However, there are also times when deadlines are missed or contracts broken. When this is the case, students are fined in various amounts. For example, an employee (student) once set up an appointment with me and did not show up. I waited for five minutes. I checked my e-mail to see if there were
The students will set the agenda for the day by wanting to report on their assignments. I may be running late only to find the meeting had already started and each student is invested in the duties he or she is contracted to do.

any communication attempts for the missed appointment. When I found none, I left my office after sending the employee an e-mail indicating that he had been fined for the missed appointment.

Upon finding this, the student set up another appointment to discuss the fine. The employee felt it was a harsh punishment for a simple mistake. I then taught him the importance of keeping his word, especially as an employee. I continued to teach that he should never stand up the boss, especially if he is the one requesting the meeting. When he understood the magnitude of what he had done, we realized that it was an oversight on his part because he had scheduled the appointment when he was still in class. The fine was discussed and ultimately retained, mainly because he never communicated with me about the error until he was already fined. A fine may also occur if a contract item is not fulfilled on time. I understand that there are times that it may not be feasible to fulfill a signed contract. If that is the case, students are allowed a way to re-negotiate their contract.

Petitions and Amendments

I allow Employees to change their contracts, but changes need to be in the form of petitions or amendments. Petitions need to be done in ample time (usually 24 hours) in order for the review board (the Teacher’s Assistant and myself) to review their contract. It is then decided if students are granted their petitions and what possible fines will accompany each. They can petition their contracts a maximum of 3 times. There are usually only one or two petitions a semester.

Amendments, on the other hand, are different as they are additions to contracts. If students feel they are falling short of their goals they can add additional projects along the way to help buffer the load and increase their potential earnings. They can amend their contracts as many times as they like. Because this is an addition to a contract, it still goes to the review board, but is often granted, as it is additional work for the students. The board clarifies the parameters and compensation, and if the employee agrees, the amendment is added to the contract.

I honestly feel there is a power in allowing students to choose. This usually results in a higher quality of product and effort. There will always be a handful of students who do not find this motivating. However, the majority find a class like this refreshing.

Principles Taught

Responsibility — Although there is a company calendar, it does not have all the deadlines that exist in the business because of all the individual projects that come into play. Employees are responsible to check their contracts and fulfill deadlines. Most of the time, as the boss of the organization, I show up to class with a general idea of what needs to be done, and the students come prepared to report on their projects or give their presentations. Often times, the students will set the agenda for the day by wanting or needing to report on their assignments. I imagine a time that I may be running late (not on purpose) only to find the meeting had already started and each student is invested in doing the duties he or she is contracted to do.

Accountability — One of the projects is the TED talk at the end of the semester. These are not just TED talks, but a collaborative effort where other students are assigned to participate in the event. Roles include event planner, master of ceremony, entertainment, videographer, photographer, and the speakers. Each person has a separate part of the event they are held accountable for. I usually don’t need to hold them accountable as they do
that themselves as coworkers. It becomes apparent who is not pulling their weight when it comes to these projects and they are compensated accordingly and sometimes fined. They not only hold themselves responsible but there is a high sense of accountability to each other. The deadlines are set, and their groups are often set up near the first of the semester where they are holding each other accountable for what needs to be done. Event coordinator Paige Jensen, a communication major studying public relations, said, “I wish I would have organized a dress rehearsal.” She then went on to say that when it comes to technology she could have been in better control of the event if she would have known how to do certain things. Paige was able to make these mistakes in a safe environment but is held accountable by her coworkers and not her boss.

**Investment —** Because the employees are doing the things that they are interested in, their work is usually at a higher level. Instead of just showing up for class to listen to what I want to share with them, they put themselves in control of the situation and take responsibility for their learning. Denton Isaacs, another communication student, said, “I am able to play to my strengths. It makes me feel good when I know that I am going to do something that I know I’ll be good at.” The employees (students) invest in their learning at a level that cannot be found unless they are empowered by opportunity.

**Accomplishment —** Finding something the students are interested in provides the passion needed to take a good activity or project and make it great. The employees are making something that they really want to show off. Many of the employees display their work in their e-portfolio and

The [students] invest in their learning at a level that cannot be found unless they are empowered by opportunity.
often put additional thought into their projects because they are excited and passionate about them. 

Repetition — I encourage Employees are to apply things they have already learned in other classes into their projects and presentations. They are to take the principles learned and re-apply them in a way that is more meaningful. It becomes something they put effort and time into. Perfect practice makes permanent, and with invested application comes a project they are really proud of. Hopefully this reapplication of formerly understood principles creates a pattern of effective behavior for the future. Because this is a senior level class, they have learned a lot previously that they are encouraged to re-apply as they work for the business. These principles range from public relations to organizational communication (as this is a communication course).

This process is a work in progress, and it does take time to fulfill if done properly. I feel there are lessons learned through taking this class. It may be because it is set up differently than a checklist class. I am allowing students to make choices that allow them to swim.

Responsibility, accountability, investment, accomplishment, and repetitive application are a few of principles I hope the students learn by attending my class. It will be much more than a class to them. It will be a class that they earned rather than took. It will be a class that they invested in rather than showed up for. It will be a class that they dove into and swam.

I wanted to empower them instead of dictating their workload. In order for my students to adopt the style of learning that I want for them, I had to shock them like I was shocked the first day of Brother Grant’s class. I needed to change their perspective of class and what was expected of them.

I honestly feel there is a power in allowing students to choose. This usually results in a higher quality of product and effort.
The following are common questions from students that we teachers “love” to be asked. As you read them, try to look for common themes and underlying motives:

- I missed class, what do I need to do to make it up?
- Did I miss anything important in class today?
- How much is this assignment worth?
- Is this something we need to know?
- When am I going to need to use this?
- I came to class almost every day and completed all the assignments, why don’t I have an “A”?
- I’m sorry I missed 6 classes this semester. I know there are only a few days left, can I make up all that I missed?

Obviously—for most of us—we don’t actually love such questions. But did you notice any themes? Perhaps you saw that each question is grade or point-focused. Or that there is no interest in the subject matter, or learning at all. You may have even noticed that each question is inherently selfish—that is, self-focused.

Do any of these questions bother you, or are they so common that you have come to expect and even accept them? The prospect is both surprising and ironic that some of us at this university—where we are a) teaching and learning focused, b) can intertwine sacred and secular truths, c) have the privilege of learning each year from teaching experts, d) have a powerful learning model, and e) can invite a God to aid in our teaching (see D&C 42:14 and John 14:26)—not only accept the aforementioned questions from students but may even foster them. Do we realize that the vast majority of our students have been socialized to think this way, because of their schools and own family upbringing? More importantly, do we understand the long-term damage this kind of point, grade, and self-focus can and is doing to our beloved students?

But, if you are still not convinced about the futility of these sincere yet misguided inquiries from our students, let’s put them in a real life context:

- I missed church, is there anything I can do to make it up?
- Did I miss anything important in the temple today?
- How much is serving in this calling worth?
- My son is interested in physics; is there something I need to know?
- My spouse wants to learn ballroom dancing, when am I going to use that?
- I made meals for my family, did the laundry, read scriptures, went to church, had FHE. Why am I not exalted?
- I’m sorry I missed 6 of my daughter’s soccer games this season. I know there are only two games left, can I make up all that I missed?

It would be silly for any one of us to ask these questions, because they reveal a misunderstanding about learning, about selflessness, about motivation, and about agency. To change this grade and self-focused approach to “learning” in our students, we must have a correct understanding about the doctrine of agency and then ensure that everything in our courses—including our syllabi—accurately reflect that.
Let’s explore agency for a moment. Elder David A. Bednar has stated (on more than one occasion):

“In the grand division of all of God’s creations, there are ‘things to act and things to be acted upon’ (2 Nephi 2:14). As children of our Heavenly Father, we have been blessed with the gift of moral agency, the capacity and power of independent action. Endowed with agency, we are agents, and we primarily are to act and not merely be acted upon.”

The desire to be agents who act and not objects to be acted upon is so strong that we—and our students—fought for it valiantly in the grand council in Heaven as Lucifer sought to destroy it (see Moses 4:3). This applies to all on this earth, not just Latter-day Saints. Author Alfie Kohn captures this same idea in secular terms. (Notice the similarity between his statement and Elder Bednar’s above):

“All of us have a basic need to be ‘origins’ in our lives rather than ‘pawns,’ as one researcher put it. It’s important to experience a sense of autonomy, a feeling that we are the initiators of much of what we do. In fact, the particular choices we make are often less significant than the act of choosing itself.”

We learn by acting, not by being acted upon. Studies—and our own personal experiences—have confirmed again and again, the more students are focused on points and grades the less they are focused on learning. They can become objects to mindlessly jump through our hoops in order to feel a false sense of satisfaction about being educated, but doesn’t actually reflect learning. If BYU-Idaho, and the gospel of Jesus Christ, are truly focused on knowing, doing, and becoming we need to do some honest reflection about what our courses teach about learning, not just the course material. The danger is that our students might know something, but won’t be able to do, and certainly not become. Elder Dallin H. Oaks expounds further on this idea (only slightly modified):

“So why then do we do it? Why do some of us compel our students “in all things” (see D&C 58:26-28) by attaching points to everything, by cold calling students in class, or by creating busy work that reflect the Law of Moses more than learning and becoming? Why do we at times create assignments and exams that ruin the natural appetite to learn? We may know certain doctrinal principles, but have we ever considered how we are applying it to how our courses are structured. Getting to the bottom of these questions requires that we each do some honest introspection. We have to see ourselves and our classes...
“as they really are” (see Jacob 4:12). If we don’t accurately identify the ways we encourage students to “go through the motions” then any reason for why we do what we do may simply be rationalizations which, ironically, turns us as teachers into objects. Even so, there are likely several common reasons for why we do this. Let’s explore just a few:

1. “Tradition!” (see Fiddler on the Roof) Traditions are only useful if they are rooted in truth. Most of us were raised on a healthy dose of cram, memorize, regurgitate, delete file. Then rinse and repeat. This is probably true of our public school experiences and how we were academically “raised” in higher learning. The Lord rebuked the early leaders of the church for losing light and truth “because of the tradition of their fathers” (see D&C 93:39). Just because the course has always been taught that way, or because you as a teacher always get high marks, doesn’t mean the students are getting high learning.

2. It Motivates Students We may assume that because students love to gobble up points, and will pretty much do whatever we tell them, that they are learning. If I perceive that students won’t participate in class, I attach points to participation—boom, I get participation! It may never occur to us that this kind of motivation and learning is short-lived while being distracting and detracting from real learning.

3. It’s Easier on Faculty It is no shock that we faculty are strapped for time and energy. So to be more efficient we can employ methods that require less of us and give students what they want (not what they need). As with our children, it is much easier to get them to start or stop behaviors than it is to learn, to develop character and righteous desires. In short, it is easier to use a “doing-to” approach in our courses than a “working-with” approach.

4. It’s Hard to Shift Our Paradigm Let’s be honest, it can be intellectually and spiritually difficult to think of alternative ways to foster agency and learning. These kind of answers don’t come easy and require diligent asking, seeking, and knocking in secular and sacred sources. Clearly there are many more reasons than this for why we don’t readily foster agency and learning in our courses, but hopefully this list will get our wheels turning. At this point you may be wondering what you can do to avoid either you or your students being “acted upon.” Let’s explore three principles rooted both in sacred and secular truth.

**Agent-based Principles**

For several years, faculty at BYU-Idaho have had the privilege of learning from teaching experts who come from a variety of backgrounds. It is quite instructive, but not surprising, that the vast majority of the ideas from these experts are directly in line with our eternal perspective on agency—including our own learning model. Essentially, they have been teaching us truths about agency and learning in a secular language. Here are three such principles from those presenters who have visited campus.

If we are truly concerned with what students think about the content...

We must foster their ability to ponder, reflect, and apply.

1. Focus more on thinking than covering content
2. Create classes that entice students to engage intellectually
3. Act as agents ourselves, rather than default to object-based teaching practices
Focus More on Thinking than on Covering Content

In its most basic form, this principle means that the purpose of our readings, classes, participation, and exams isn’t merely getting students to parrot back content from our field. The content is a vehicle for learning how to think deeply and critically. In essence, the content is a means not an end. When Dr. Maryellen Weimer visited campus she emphasized how we violate this principle: “Most teachers wait 2.3 seconds between the question asked and the teacher doing something.” If we are truly concerned with what students think about the content and how they make sense of it, we must foster their ability to ponder, reflect, and apply. Moreover, Dr. Weimer painfully pointed out that students often ask bad questions because they have learned by the kind of questions we ask them.

Dr. Larry Michaelson reinforced this principle as he encouraged us to “give students space to be creative and innovative.” This is hard to do when we have a perfectly packaged class that students are told what to do in all things, and then given points for every move they make.

Dr. Eric Mazur similarly invited us to help students to think by “teaching by questions, not by telling. Thought questions foster deeper learning than fact questions.” We can also hold students accountable for learning rather than just reading. When we review everything that students have just read (or were supposed to read) we are acting upon them and are perhaps too content driven.

Finally, Elder David A. Bednar summarizes this principle beautifully:

“The particular topics investigated and learned are not nearly as important as what has been learned about learning. As we press forward in life—spiritually, interpersonally, and professionally—no book of answers is readily available with guidelines and solutions to the great challenges of life. All we have is our capacity to learn and our love of and for learning.”
Entice Students to Engage Intellectually (and Spiritually)

It is important to ask ourselves, “what are the differences between compelling a student to learn versus enticing and persuading?” In all reality, we can’t really compel learning, only behavior that looks like learning. We need to become familiar with how the Lord himself persuades us to learn and to become. Certainly the adversary understands persuasion, and uses it for his own purposes, so we need to be attuned to how we entice students to learn in our courses.

One way to entice learning is to teach students the value and critical importance of asking questions. Allowing students to ask questions in a variety of ways enables open and authentic inquiry. Some teachers have done this employing various technologies that entice students are encouraged to ask anonymous questions regarding the course material. Examples might include using Top Hat, Poll Everywhere, or Piazza where students can engage with one another anonymously asking and discussing questions. This has a different feel (and outcome) than mandated, point-driven interactions on a discussion board.

As Teachers, Act as Agents Ourselves

Dr. Ken Bain best sums up this principle in his book What the Best College Teachers Do:

“Outstanding teachers had to learn how to foster learning, and they must constantly remind themselves of what can go wrong, always reaching for new ways to understand what it means to learn and how best to foster that achievement. In short, they can do intellectually, physically, and emotionally what they expect from their students.”

“Fundamentally, they are learners, constantly trying to improve their own efforts to foster students’ development, and never completely satisfied with what they have already achieved.”

We cannot simply repeat the past in our classes because “it works” or because “everybody is doing it”. Remember, getting students to act like they are learning doesn’t mean they are actually learning. We always need to be acting and learning ourselves. This does not mean to run faster than we have strength, but it does require us to take an honest look at the traditions of our academic fathers through the lens of agency and learning.

It is easier to give certain kinds of exams to students because they expect it and we teachers don’t have to act. It requires hard spiritual and intellectual work to think of assessments that are more meaningful and nurture learning all while being practical enough to grade.

We also become objects when we fight innovation that may cause us to grow and be uncomfortable…in essence, to learn. Or when we murmur about our load, administration, or “students nowadays.” All of these approaches make us pawns rather than the initiators of our work and our lives. This doesn’t mean we accept our circumstances as objects, but we focus on what we can control, and many times that is simply our attitude and our approach to solving problems.

Dr. Weimer taught us to “seek to learn from students how they actually learn. Council together.” Additionally,
act by using the vast university resources to improve such as the SCOT’s program, new faculty training manual, review videos from past expert speakers, and many more. We might use a teaching journal and be reflective of what seems to be working and what doesn’t. There are many ways in which we can all do better to act, and that may mean to simplify and innovate rather than complicate.

Let us avoid fear-based learning principles and better understand and use faith-based principles. May we grow professionally and personally so that with our students we become disciple-leaders. This university can truly be a temple of learning all things—both secular and sacred.

“He [or she] that is compelled in all things, the same is a slothful and not a wise [teacher or student]; wherefore he [or she] receiveth no [real learning]. Verily I say, [teachers and students] should be anxiously engaged in [real learning], and do many things of their own free will, and bring to pass much righteousness. For the power is in them, wherein they are agents unto themselves. And inasmuch [as teachers] do good they shall in nowise lose their [power to change, to grow, and help others do the same].” (D&C 58:26–28)
We need to be caring, kind, and compassionate. We need to be empathetic and understanding.

BRENT BEAN