Lilly Conference
COLLEGE AND UNIVERSITY TEACHING AND LEARNING

Newport Beach, CA
February 19-22, 2015

EVIDENCE-BASED TEACHING AND LEARNING

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Preface to Conference Proceedings

This past February approximately 275 conference participants attended the Lily Conference on College and University Teaching in Newport Beach, California. These individuals represented 130 different institutions, from 30 states, and 7 countries. The conference program offered 5 plenary speakers, 80 concurrent sessions, 19 round-table discussions, and 27 poster presentations.

I am grateful to all of the individuals who presented their work at the Lilly Conference on College and University Teaching, Newport Beach 2015. Conference evaluations, supported by anecdotal comments, clearly noted the quality of the session presentations, both in content and delivery.

Of the many things that are needed to make a conference a success, conference presentations are by far the most important. This is certainly a group effort and I appreciate the willingness of the presenters to help make this important event possible.

Respectively Recorded,

Todd Zakrajsek, Conference Director

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Cheryl Amundsen
Simon Fraser University

Cheryl Amundsen is a Professor in the Faculty of Education at Simon Fraser University. Her primary program area is Educational Technology and Learning Design. Previous and ongoing research has focused on how university professors develop pedagogical knowledge in relationship to their subject matter, how they come to understand teaching, how they make instructional decisions, and the effects of these from the learner's perspective.

Presentation: Supporting Faculty Inquiry About Teaching: Implications for Teaching and for Curriculum

David Brobeck
University of St. Thomas

David Brobeck is an Assistant Professor at Walsh University in North Canton, Ohio. He teaches graduate education. In 2005, the Governor of Ohio recognized him with a resolution commemorating his lifetime contributions to the cause of quality education. Currently, David has research interests in the effects of brain stimulation and learning as well as how active learning enables more students to learn more effectively.

Presentation: Lightening Struck the Classroom, and We Kissed Convention Good-Bye

Stephen Brookfield
University of St. Thomas

Stephen Brookfield is the John Ireland Endowed Chair at the University of St. Thomas. He has written, co-written or edited sixteen books on adult learning, teaching, critical thinking, discussion methods and critical theory, six of which have won the Cyril O. Houle World Award for Literature in Adult Education. Stephen currently serves on the editorial boards of educational journals in Britain, Canada and Australia, as well as in the United States.

Presentation: Getting Students to Participate in Class

David Daniel
James Madison University

David B. Daniel is a psychology professor at James Madison University, as well as the managing editor of the journal Mind, Brain, and Education, and consulting editor for the journal Teaching of Psychology. In just the past 5 years, has published over 20 articles and chapters on teaching and pedagogy. David has been honored numerous times for his teaching and translational efforts, including JMU's Outstanding Teaching Award, the Society for the Teaching of Psychology's Teaching Excellence Award, and the Transforming Education through Neuroscience Award.

Presentation: The Darkside of Pedagogy

Todd Zakrajsek
International Teaching Learning Cooperative

Todd Zakrajsek is an Associate Professor in the Department of Family Medicine and Executive Director of the Academy of Educators at the University of North Carolina, Chapel Hill. Todd has directed three teaching centers over the past 15 years and currently serves in leadership roles for several educational efforts, including board membership at Lenovo Computer and Microsoft. He has published and presented widely on the topic of effective teaching and on student learning.

Presentation: How Teaching Is Changing and Where We Are (or may be) Headed

What Are The Best College Learning Experiences? Students' Perspectives

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Abstract

In the last two decades, several large-scale studies have identified experiences that contribute to college students' learning and development. While based partly on student reports of learning as an outcome, these studies have not examined students' beliefs about the contexts of their learning. We surveyed members of the senior class at a small liberal arts college about their best learning experiences while in college. Students' perceptions were largely consistent with research findings, though they placed more value on participation in Greek life and less value on the first year seminar.

Introduction

In the last two decades, several large-scale studies have examined major factors that contribute to college students' learning and development (e.g., Astin, 1993; Light, R. 2004; Pascarella & Terenzini, 2005; Kuh, 2008). A summary of this literature commisioned by the National Postsecondary Education Cooperative (Kuh, Kinzie, Beckley, Bridges & Hayek, 2006) identified a set of "effective educational practices and programs that have been linked consistently to student engagement, persistence/retention, and learning, including the amount and nature of faculty-student contact, peer interactions, experiences with diversity, cocurricular activities, programs for new student adjustment, excellent advising, first year seminars, and learning communities. Kuh (2008) later summarized research using the National Survey of Student Engagement (NSSE) and posited a set of ten "high impact practices": First-Year Seminars and Experiences, Common Intellectual Experiences, Learning Communities, Writing-Intensive Courses, Collaborative Assignments and Projects, Undergraduate Research, Diversity/Global Learning, Service Learning/Community-Based Learning, Internships, and Capstone Courses and Projects.

While most of this research has used students' reports of their of engagement and learning as one of the outcome variables, there has been little direct investigation of students' beliefs about the experiences that contribute most to their learning in college. The study described below was designed to examine senior college students' beliefs about what aspects of their college experience were most important in facilitating their learning, development and personal growth, and to determine whether their perceptions were consistent with the factors identified as important in the research literature.

Methodology

The Institutional Setting

Data was collected at Union College, a private, residential liberal arts college in Schenectady, NY enrolling 2100 undergraduates. The curriculum is a traditional liberal arts program plus an engineering division. Union emphasizes undergraduate research, more than half of its students participate in international programs, and 40% belong to Greek organizations.

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Participants and Procedures

All members of the senior class were invited to complete a survey during their last three weeks of college; 254 (51%) responded, including 137 females and 81 males. Students from the four academic divisions (humanities, social sciences, sciences, and engineering) were represented about proportionally to their representation in the population. Students received $7 for participating.

We asked students to assess their learning experiences in two different ways: through open-ended qualitative questions, followed by closed-ended quantitative questions. Students were first asked to name their "five best learning experiences" and describe what they had learned from each. We deliberately did not specify the nature of these experiences (for example, whether to include both academic and co-curricular experiences, formally structured activities or informal personal experiences), since our goal was to examine students' constructions of the sources of their learning. After generating their own list of best learning experiences, students were given a standard list of experiences (including ones they had not named), asked whether they had participated each, and how much each experience had "contributed to (their) learning, growth, or personal and intellectual development" on a 5-point Likert scale (1 = Not at all to 5 = Very strongly).

Results

Students' reported of best learning experiences are summarized in Table 1; their descriptions of what they learned from each are summarized in Table 2. Students' ratings of how much each of a list of specified experiences contributed to their learning, development, and personal growth are summarized in Table 3.

Terms abroad and senior thesis

Students saw terms abroad and the senior thesis as their two most powerful contexts for learning. Both were named as one of the top five experiences by more than half of participants; they were also most frequently ranked as students' first or second best learning experience. Asked how much these experiences contributed to their learning, 97% of term abroad students and 87% of thesis students said "a good deal" or "very strongly."

Students described two main benefits of terms abroad: 1) greater independence, confidence, and knowledge of self, which they attributed to "being on (one's) own, " in a new situation, without the usual supports of friends, school, and family, and 2) becoming familiar with another culture led to greater "perspective," "awareness of the world," "open-mindedness," "respect" – as one student put it, "knowing there is a big world beyond Union."

Many students (62%) reported that doing a thesis helped them develop responsibility, organization, and time management skills. They also frequently mentioned learning about the content area of their project (34%) and learning to analyze ideas (21%). Only a few students (8%) said that doing a thesis helped them improve their writing.

Other learning experiences

The next most frequently mentioned experiences are classes, informal social life, and Greek life –major activities that form the daily context of college life. While few students put these experiences in their top two, around half included them in the top five. These were followed in frequency by a variety of specific experiences (e.g., sports, presenting work at conferences, cocurricular activities, first year seminar).

Discussion

In general, students' perceptions of the contexts of their learning are consistent with the factors found to matter in past research. The two most highly rated programs – terms abroad and thesis – have both been identified as "high impact" factors. On the other hand, students rated participation in Greek life as a very important learning experience, while research has found moderate or mixed effects. And students undervalued the effect of the first year seminar, identified by past research as a "high impact" context for learning.

The two most frequently cited experiences – terms abroad and theses - are both sustained, intensive, structured programs for learning outside the usual classroom environment. Both present the student with a significant challenge: to accomplish something that is probably new to them (to live in a foreign culture with relatively little adult support/supervision, to do a significant piece of independent scholarly work). Interestingly, both of these experiences ask the student to function more "like an adult" than is required in traditional classes – to be both more independent and more responsible. Moreover, taking on this more adult role allows the student to form a more personal, less authoritarian, "collegial" relationship to a professor. Both the thesis and the term abroad, then, might be seen as "trial solo flights," in which the student steps outside of the structure and support – but also limitations - of the traditional student role and finds out what they can do. The sense of achievement in both cases ("I didn't know if I could do it, but I did it!") may be an important component in their power as contexts for learning. This finding raises the possibility that other experiences which give this kind of combination of autonomy, challenge and achievement might also provide powerful contexts for learning.

Table 1. Students' rankings of their five best learning experiences in college

	One of five best	First or second	Mean rank
Thesis	64%	40%	2.3
Terms abroad	55%	44%	1.8
Greek like	56%	30%	3.3
Classes	49%	17%	3.2
Informal social life	45%	17%	3.1
Research (not thesis)	36%	13%	3.0
Sports	27%	13%	2.7
Internship/work	25%	8%	3.1
Extracurricular activities	23%	8%	3.1
Presenting work at conference	19%	4%	3.6
Upper level seminars	18%	5%	3.3
Relationships with faculty	9%	3%	3.7
First year seminar	9%	3%	3.0

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Table 2. Students' descriptions of what they learned from different experiences

	Term Abroad	Thesis	Advanced Seminars	General Education Classes	All Classes	Internships/ work
Independence	x	x				x
Responsibility		x				x
Time management		x				x
Open mindedness	x					
Analytical thinking		x	x	x		
Writing			x	x	x	
Speaking discussion skills			x	x	x	x
Social Skills						x
Self-knowledge						x
Confidence	x	x				
Knowledge of an area		x			x	
Wider perspective	x	x				x
Research process		x				

Table 3. Student ratings of how much various college experiences contributed to their learning, growth, intellectual and/or personal development

	Almost Nothing	Very little	Moderately	A good deal	Very Strongly	Mean (sd)
Term	1%	1%	1%	14%	83%	4.8 (0.6)
Thesis/senior project	1%	3%	9%	34%	53%	4.3 (0.9)
Upper level seminars	4%	3%	20%	39%	34%	4.0 (1.0)
Internship/practicum	9%	9%	13%	22%	48%	3.9 (1.3)
Relationship with faculty	3%	10%	20%	27%	42%	3.9 (1.3)
Summer research	12%	3%	13%	41%	31%	3.8 (1.3)
Independent research	13%	7%	15%	46%	31%	3.7 (1.3)
Independent study	11%	11%	18%	32%	28%	3.6 (1.3)
Presenting at conference	16%	13%	18%	13%	40%	3.5 (1.5)
Presenting work on campus	8%	13%	32%	27%	20%	3.4 (1.2)
First year seminar	36%	29%	25%	16%	5%	2.5 (1.2)

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Online Practice Exams Improve Students' Exam Performance

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Abstract

Proposed changes in education regularly make the news and it is increasingly common to encounter stories about how MOOCs, flipped classrooms, and other online course delivery methods will change higher education forever. Perhaps smaller steps would be preferable. This paper explores one—a useful technology that can be used broadly in courses—online practice exams. The data from 1035 students who had access to online practice exams suggested strongly that taking practice exams helps students attain higher exam scores. We conclude that equivalent content practice exams that provide feedback help students perform better on graded exams.

Introduction

A recent article in the Education section of the New York Times Magazine (Cary, 2014) reported on research and innovations in practice exams and student learning. The author described unpublished research by Elizabeth Ligon Bjork suggesting that giving on-paper practice exams to students before the semester began improved their exam scores at the end of the semester. The use of this specific technique may or may not be good advice to instructors but the zeitgeist is surely moving in the direction of providing practice tests to improve student learning—especially in online and hybrid courses. The category "practice test" includes both quizzes and exams but we focus on exams in this paper.

Much research has been done in various disciplines describing the uses and benefits of practice tests (e.g., Balch, 1998; Brothen, 1996; Gurung, 2008; Knaus, Murphy & Holme, 2009; Kulik, Kulik, & Bangert-Drowns, 1984; Lee-Sammons & Wollen, 1989; Maki & Serra, 1992). The value of practice tests administered in class and interpreted by instructors has been asserted for over three decades and researchers have made several important findings during that period of time. Generally, students do better if they get feedback on their knowledge of the material along with an indication of how much additional effortful study they need to engage in. Such features may be particularly crucial in online courses because students have less social comparison information on which to base their sense of how well they are doing. Students might find it hard to discuss course material difficulty and how to approach it when their peers are online instead of sitting next to them in class. Online courses especially need markers such as practice tests to help students navigate their way through the course material. Practice tests may be crucial in online courses to compensate for this weakness, but it is not clear if they are generally beneficial for all types of courses and whether students in traditional or hybrid courses could also benefit.

We believe that three questions emerge from this developing trend. First, if students are allowed free access to online practice exams, would they make use of this learning tool? Second, would taking the practice exams lead to better exam performance? Third, given the answers to these questions, what kinds of suggestions should instructors make to their students about using practice exams? This article presents data obtained from our exploration of these questions.

Methodology

Participants were 1035 students enrolled in an introductory psychology course at a large Midwestern university in Fall Semester 2012. We delivered the course via live lectures three days each week and a discussion period one day, utilized blended live and online activities and resources, and used the Moodle course management system to deliver all testing. We administered the actual exams in a computerized testing center monitored by proctors and required students to take three midterm exams and one final exam to fulfill course requirements. We provided corresponding practice exams for each of three midterm exams and the final exam. Students could take the practice exams at any time on any Internet connected computer during a week's period before and during the several day exam period for each of the actual exams. We did not include students' performance on the practice exams in the final course grade.

Consistent with our University's human subjects policies, we collected data on practice and actual exam performance and two academic ability variables for all students in the class. First, we obtained data from course records kept by Moodle. They were 1. How many times the students attempted to take the practice exams; 2. When they took the practice and actual exams; 3. The amount of time spent on each practice exam; and 4. Their total scores on each of the practice and actual exams. In addition, we calculated an average practice exam score for each student. Second, from the Academic Records Office, we obtained each student's Composite score on the American College Testing Program (ACT) assessment and current cumulative college grade point average (GPA).

The construction, format, and delivery for all three 50-item midterm exams, the 100-item final exam, and their corresponding practice exams were basically the same. First, all questions were four alternative, multiple-choice items with one correct answer. Second, Moodle randomly selected from item sets in a large item pool 50 (or 100 for the final) items for each exam. Students thus received unique sets of items on each attempt. Third, for each exam, the 50 (or 100 for the final) sets of items that measured course content consisted of items of equivalent difficulty that we established in the exam writing process and in subsequent testing with students. Of the approximately eight items in each set, we reserved half for the practice exams and the other half for the actual exams. Thus, students received equivalent practice exams on each attempt. On actual exams, they also received exams equivalent to those received by their peers. Fourth, students had unlimited attempts on the practice exams and one attempt on the actual exams. The practice exams and the actual exams measured the same equivalently difficult content domain—across all exams, the average practice exam score and the corresponding actual exam score were highly correlated ($r = .816, p<.001$).

The practice exams provided feedback to students. Immediately after students submitted the exams, they saw their total score, the items, and whether their answers to each of the items were correct. The practice exams did not have a time limit, but there was a time limit for the actual exams. For this study, only the attempts on practice exams with scores above 13 points (25 points for the practice final) were included in the data because scores of 12 (24 for the practice final) and below are lower than that expected from randomly selecting answers and thus suggested that those attempts were most likely not taken seriously. Another criterion of exclusion for the practice exam attempts was time on the exam. We excluded the small number of practice exams that took more than two hours, as we postulated that they might have been taken by students who, for example, began a practice exam, and then were distracted by other tasks (many of these exams had low scores or several unanswered questions). We also excluded data from those few practice exams taken by students after their corresponding exam times because information from them would have no predictive value for their actual exams.

Results and Discussion

In answer to our first question, an average of 809.70 (78.23%) students took at least one practice exam with an average of 2.87 practice exams for each of midterm exams 1-3 and 676 (65.31%) students took an average of 1.74 practice final exams. Given free access to online practice exams, students generally make use of them. We suspect that the number taking them dropped for the final exam when end of semester business probably interfered with any study methods other than students' usual approaches.

In answer to our second question, the total exam points for the 978 students finishing the course who took at least one practice exam during the semester compared with those 57 finishing who took none were statistically significant from each other ($t=7.45, p<.001$). Students taking practice exams before each exam scored an average of 14.31% better on actual midterm exams 1-3 and 13.60% better on the final exam. To explore these differences further, we conducted several correlation analyses between total actual exam points earned and two other variables. We report here the relationships for total practice and actual exam points or total practice exam attempts because the analyses revealed basically the same patterns of results for each exam separately. Among those students who took practice exams, better total actual exam scores are associated with the total number of attempts at practice exams ($r=.466, p<.001$) and higher average practice exam scores ($r=.816, p<.001$).

We explored the possibility that our affirmative answer to question 2 could simply indicate that students taking practice exams were better students and would have done better on actual exams in any case. This is a classic potential third variable problem where academically excellent students might simply both take more practice exams and perform well on the actual exams. Consequently, we calculated partial correlations that controlled for the variables of ACT composite scores (a measure of academic ability) and GPA (a measure of academic performance). Significant positive correlations remained between the sum of actual exam scores and the total of average practice exams controlling for ACT ($r=.786, p<.001$) and for GPA ($r=.640, p<.001$). We found similar results for the sum of actual exam scores and total number of attempts at all practice exams for ACT ($r=.482, p<.001$) and for GPA ($r=.232, p<.001$).

These partial correlations suggest that taking more practice exams and scoring higher on them indeed predicts better actual exam performance regardless of academic ability. Our results are consistent with Student and Williams' (2005) suggestion that students who take and improve their scores on practice exams will perform better on exams than students simply taking them for other reasons such as to determine what kind of questions are likely to be asked on the actual exam. Based on these correlations, we conclude that students who take more practice exams and improve their scores on them will perform better on actual exams because they are able to learn from and act on the feedback provided by practice exams about what they already know well and where they need to improve.

Finally, our third question asked what advice instructors should give their students about online practice exams. Obviously, some of our students made little use of what our data shows to be an effective study tool. The first challenge is for instructors to convince students that the time spent using practice exams will benefit them. We routinely recommend to students that they not only take the practice exams but that they study their feedback to remediate their deficiencies. Presenting students with the data we obtained may help but doing so via personal communications from instructors is probably crucial.

Once instructors have convinced students that taking practice exams is a good idea, the task is not over. We noticed in our data that some students took the practice exams only minutes before they took the actual exams. This left no time for these students to remediate their deficiencies. We suggest that instructors should advise their students to start as soon as possible and explain that research demonstrates that starting early leads to better exam performance. In the present study, earlier dates of beginning to take the practice exams correlated positively with higher actual exam scores ($r=.266, p<.001$).

In conclusion, our data show the usefulness of online practice exams and we urge instructors to create them for their students. As we suggested initially, this tool may be particularly important in online courses but can be valuable in blended courses such as ours and in more traditional courses as well. Their advantages are many in addition to those supported by our data. Once created, they are easy to administer, students can access them any time during the period instructors make them available, and students can see their scores and feedback immediately after completing them. Also, course management systems such as Moodle put easily used tools to create these kinds of exams into the hands of instructors much more readily than in the past. We are convinced that practice exams are a generally useful tool and our future research will explore the effectiveness of various ways to convince students of that.

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The Effect of Learning about the Brain on College Students' Study Strategies and Perceptions of Effective Teaching

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Abstract

Sixty-eight pre-service teachers were enrolled in an educational psychology course that integrated brain-based learning content and had students apply this content to their own study habits. Pre-service teachers' journal entries indicated that they employed new strategies including distributed practice, asking "why" questions while reading, and visual imagery. They were most surprised to learn about the positive effects of exercise and diet on working memory and that stress impairs memory. According to reaction papers, the sample cited more constructivist perceptions of pedagogy by the end of the course. Most of this sample reported observing brain-based learning examples in a field observation.

Literature Review

Recently, there has been much concern over poor retention rates among students attending American universities; currently national statistics indicate that at least one-third of students do not complete a degree at the university they began their careers at within six years. While there are many factors that contribute to poor retention rates, certainly poor study strategies are among the most important.

In tandem with this concern, is the increasing call for courses, such educational psychology, to integrate content on effective study strategies (Dunlosky et al, 2013). Dunlosky and others also contend that pre-service teachers need to learn which study strategies are most effective so that they, in turn, can teach their future students these strategies. Along with the need to understand study strategies useful across the curriculum, there are several relatively new foci in courses in educational psychology including the inclusion of neuroscience and the brain, promoting a growth mindset of intelligence, and challenging pre-service teachers' views of effective teaching (Jensen, 2008; Willis, 2009-2010; Dweck, 2007). However, there are few investigations documenting the effect of teaching college students about how the brain learns; there is also a paucity of research on how such an effort may modify pre-service teachers' preconceived ideas about effective teaching. Therefore, the purpose of this action research study was to document the effect of learning about the brain on pre-service teachers' study habits, preconceptions about effective teaching strategies and the professional responsibilities of teachers, and the way pre-service teachers reflect upon required classroom observations of grades 4-8 classroom teaching.

Methodology

Participants

The participants included 68 pre-service teachers enrolled in an educational psychology course; the course was taken in the spring semester at a mid-sized university. Among the participants there were 18 were male and 50 female pre-service teachers. The majority of participants were freshman (88%) and the remaining 12% were sophomores. All of these pre-service teachers were enrolled in the middle grades teacher certification program; none of the students were admitted to the university on a provisional basis or required to take remedial coursework.

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Description of Course

The course was a requirement for teacher certification and designed as the first in sequence in education coursework. Content about brain-based learning and teaching was infused throughout the course and examined in a unit of study. A field observation of 10 hours in grades 4-8 classrooms was required along with a field observation report in which the pre-service teachers described examples of research covered in the course

The educational psychology course addressed brain-based learning, which focused on study strategies applicable to this university student population. It also addressed brain-based teaching, which emphasized how to use research in cognitive psychology and motivation as the basis for instructional planning. The brain-based learning content covered information about the physiology of the brain including brain parts such as the pre-frontal lobe, the amygdala, the hippocampus, the reticular activating system, the role of neurotransmitters such as dopamine in learning, synaptic pruning and myelination, neuroplasticity, and neurogenesis. There was also a focus on how emotions, diet, sleep, and exercise affect learning. The course considered principles of how memory works including memory is a residue of thought, estimates of what we know are fallible, and how ambiguous cues affect memory (Willingham, 2008). The course also examined effective study strategies, developing a growth mindset, and self-regulation strategies.

In terms of brain-based teaching, the course focused on how these pre-service teachers could integrate research on attention, encoding, memory and emotions, and executive functions into their lesson plans. The course also covered learning styles, multiple intelligences, Piaget's constructivism and cognitive stage theory, Vygotsky's zone of proximal development, and motivation. In addition, the course considered brain-based reasons for "acting out" and "zoning out" relative to preventative classroom management as well as the role of executive functions housed in the prefrontal cortex.

Data Collection Sources

Three written assignments served as the principal data sources. At the beginning of the semester, the pre-service teachers were required to write anonymous reaction papers about what they believe about effective teaching practices; at the end of the semester, they repeated this process. In a second assignment, the pre-service teachers kept a journal about their reactions to the brain-based content, recording information that was new to them and to what extent this information affected their own study practices; pre-service teachers selected at least one brain-based concept or principle, apply it during the current semester, and report the effects. In a third assignment, the pre-service teachers were required to document in a field observation report how classroom teachers used brain-based learning concepts and principles. If they did not observe examples of these, they were then required to suggest examples of brain-based strategies. In addition, the sample anonymously completed pre and post Likert-type surveys at the start and end of the semester concerning perceptions about the professional responsibilities of teachers.

Results

A majority of these pre-service teachers (82%) reported in journal entries that learning about how the brain works had a profound effect on their own study habits. The most common ways these pre-service teachers reported modifying their study habits were making up test questions prior to an assessment, the use of relaxation breathing before and during an assessment, the use of visual imagery while studying, asking "why" questions while reading, and the adoption of distributed practice using frequent review sessions rather than cramming study into one session. According to these pre-service teachers, among the most surprising brain-based findings included the potential positive effects of exercise and diet on working memory and neurogenesis, the need for at least nine hours of sleep during adolescence for optimal memory and learning, and the deleterious effects of stress on memory and learning. Only 7% of the pre-service teachers reported that either no effect or negative effects occurred after implementing brain-based study strategies.

Among the most common benefits mentioned by the pre-service teachers were improved grades, reduced stress, enhanced focus, and improved mood. The following quotes illustrate the effects of using specific study strategies:

> I began asking myself "why" questions when reading. I am not the best reader, so this has allowed me to know whether or not I understood the information. When I did not understand, I reread. This has significantly impacted my homework, quizzes, and class understanding.

> I started to study two weeks in advance. I also met up with a classmate to study and we both created multiple-choice questions to help prepare for the exam. When the second test came around, I felt 100 times more confident and wound up earning a much better grade.

> To learn the hippocampus is associated with working memory, I pictured a hippo in business attire working at a desk. This helped me to link the two during the quiz and I ended up getting the question correct.

The quotes that follow indicate the effects of exercise and stress reduction:

> I do my routine of running and calisthenics first. I read the rest of *Butterfly* and two more books after. This is the most I have ever read in my life and I can probably attribute some of the credit to the new exercise routine I have developed. I think I definitely will keep this routine going in the future.

> When taking a test in class, I was getting overwhelmed and panicked even though I knew the material, so I took a few deep breaths and thought of something happy and then continued. My grades have definitely improved.

In terms of perceptions about effective teaching practices, these pre-service teachers were much more likely by the end of the semester to comment on student-centered and constructivist pedagogies that maximized student engagement as compared with the prevalence of teacher-directed strategies in the initial reaction papers. When comparing the pre survey (26%) with the post survey (72%), pre-service teachers were much more likely to indicate that they believed it was the responsibility of teachers to teach students about how their brains work, no matter what subject they taught. In addition, they were more likely to indicate it was the teacher's responsibility to praise students for effort on the post survey (92%) compared to the pre survey (44%).

An analysis of the field observation reports indicated that while the large majority of participants reported observing examples of classroom teachers using brain-based learning concepts and principles (79 %), the remainder of the participants reported not observing any examples. Most common among the illustrations of brain-based learning the participants recorded were the following: the focus diffusion cycle, movement during teaching and learning, music integrated into instruction to promote attention and memory, the use of dopamine boosters, modeling how to use visual imagery to aid the learning process, and practice with executive functions such as planning, organizing, and self-monitoring.

Conclusions

These findings bear significance on the potential positive impact of studying brain-based learning for pre-service teachers early on in their college careers. If, in fact, the improvement in grades and reduction in stress reported in this investigation was a genuine result of learning about the brain, it may be helpful to require such a course of all college freshmen to improve retention. While such courses are often included in remedial programs for freshmen, these may be of help to all university students. These data also suggest that difficulties in the areas of reading and study strategies may not be unique to only those students designated to take remedial coursework. Further investigations should document the effectiveness of the curriculum described here in future semesters, longitudinally tracking the effects by using quantitative achievement data as well as student self-reports.

Some surprising findings emerged when analyzing the journals of these pre-service teachers. Notable among these were the frequency with which they reported psychological issues that affected their study including stress, anxiety, and depression. Future investigations may focus on the role of university counseling centers in addressing some of these psychological issues as they interface with the preparation of pre-service teachers. These data also indicate the need to inform college students about the potential psychological and academic benefits of using college recreation facilities.

For pre-service teachers in particular, learning about the brain and then applying this knowledge directly to their own study habits as well as to an analysis of classroom observations, also has the potential to modify how they initially perceive effective teaching strategies and the professional responsibilities that are part of effective teaching. Future studies should also follow pre-service teachers into student teaching in order to document the long-term effects of learning about the brain in pre-service coursework.

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A Comparison of Student Performance Outcomes in Traditional and Flip-Hybrid Courses

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Abstract

Contemporary **e**ducational literature promotes flipped or inverted instruction as both student-centered and enhancing student outcomes. Consequently, student performance in traditional face-to-face Introductory Psychology courses (n = 163) were compared with student performance in flip-hybrid Introductory Psychology courses (n = 165) taught by the same instructor in a community college to determine differences, if any, between the two course designs; with unexpected results.

Literature Review

We live in an era of rapid change, where college students "desperately need [to know how] to think, argue, explain, listen" (Neshyba, 2013, p.12; Nilson, 2013). In our turbulent world, each individual is predicted to have multiple careers in a lifetime; and within each of those careers, must have the ability to learn to use novel technological resources to survive/to prosper (Bart, 2014). Traditional instruction is sometimes disparaged as lecturing to the test and thought to shortchange students and the greater community, when college educated individuals do not understand that they do not know how to seek information, evaluate information, and apply information that is relevant to a given task (Wiggin & McTighe, 2007). The internet offers access to information and educators are no longer the primary disseminators of knowledge (Bergman & Sams, 2014; Restad, 2014, p. 14). Given this condition, some educators' question

> "whether it still makes sense to deliver a lecture when students can see the same material covered more authoritatively and engagingly—and at their own pace, on their own schedule, and more importantly, with better learning outcomes" (Berrett, 2012, p. 1).

Flipped instruction, also known as the inverted classroom model (ICM) assigns students to view video lectures/podcasts, complete formative assessments, as well as read outside of class (Bishop & Verlager, 2013). Flipping is considered a student-centered mode of instruction because the focus is on students doing the work of learning, rather than on the teachers' presentation of course content. Flipped instruction: puts the learner at the center of a course instead of the teacher (Talbert, 2014). The learner is assigned document searches, videos, reading, and written assignments to evaluate and sort for relevance. These practices compel students to construct meaning through written and verbal discussion inside and outside of the classroom (Weimer, 2014). Student-centered instruction has frequently been implemented in graduate education because lecture as the primary method of instruction is not recommended for deep learning of content (Lee & Wolfe, 2014). Flipping the classroom is currently promoted as expanding independent student learning and enhancing student performance. Student-centered methods such as flipped instruction are infrequently implemented with larger undergraduate courses because alternatives to traditional lecturing take more time and more effort for students to complete and for instructors to design and evaluate (Bergman & Sams, 2014; Honeycutt, Garrett, & Glova, 2014). Additionally, with plentiful opportunities for social interaction/ entertainment, (or family/work responsibilities for many enrolled in community colleges), undergraduates are rarely enthusiastic about committing the time, effort, and energy demanded for independent learning; despite inherent rewards of understanding and improved ability to learn that comes with autonomous practice. Hinton, Fischer, & Glennon (2012) report that students in flipped courses may be resistant because most of their academic experience consists of passively being told what to memorize as best they can for the test.

Educators are urged to analyze student outcomes and use their findings to improve instruction (Driscoll & Wood, 2007). With this goal in mind, community college student performance in traditional face-to-face courses and flip-hybrid courses, taught by the same instructor, were compared to determine differences, if any, between the two instructional course designs.

Methodology and Results

This study exemplifies correlation research with quantitative SPSS ™ (IBM) analyses to identify statistical differences between pre-existing conditions when randomization of participants and control for extraneous variables is not possible (McMillan & Wergin, 2009). The traditional courses were offered from winter 2012 through 2013; while the flip-hybrid courses were offered from fall 2013 through 2014. The traditional group consists of five traditional course sections (163 students) and seven sections (165 students) comprise the flip-hybrid group. The two earliest traditional sections (60 students) were dropped from the data set to allow more equality in student numbers because having approximately equal groups is recommended for statistical analysis (Morgan, Leech, Gloeckner, & Barrett, 2007). Differing course enrollments will be considered in the Discussion of Results section. Table 1 lists the content of each of the two designs, with differences underlined.

Table 1. Traditional and flip-hybrid course designs (differences underlined).

Traditional (4 credit) 15 weeks	**Flip-hybrid** (4 credit) 15 weeks
Same instructor, same course, same content	Same instructor, same course, same content
Meet 1 hr., Mon., Tues., Wed., Thurs. (4 hrs. total)	Meet 2 hrs. Wed., OR Thurs., (2 hrs. total)
5 courses, between 11:00 a.m. and 3:00 p.m.,	7 courses, between 11:00 a.m. and 3:00 p.m.,
Out-of-class reading assignments	Out-of-class reading assignments
Lecture 2.5 – 3 hours over 4 days, outline of notes provided	Out-of-class video lectures (approx. 1 hr.)* powerpoint™ notes provided
Small group activity one hour per week	Small group activity 1.5 hrs. per week
(No text/notes) bi-weekly short answer tests	(No text/no notes) weekly short answer test
Weekly (open text/notes) on-line mult. ch. test	Weekly (open text/notes) on-line mult. ch. test
Three (5 pg.) papers submitted to SafeAssign™	Three (5 pg.) papers submitted to SafeAssign™

Narrated powerpoint™ videos (4 – 5 weekly) each approximately 15 minutes in length

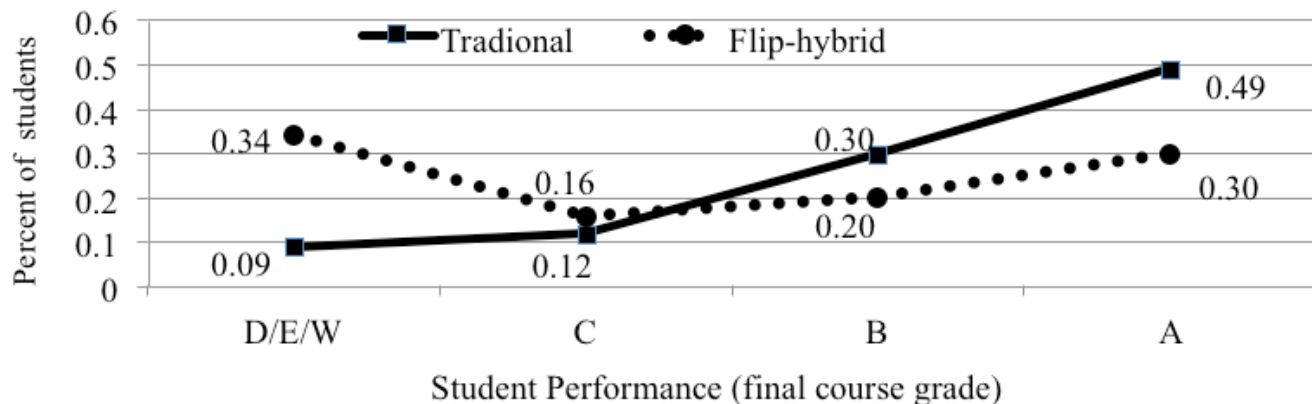**Figure 1.** Student Performance in traditional (n =163) compared with flip-hybrid (n=165) courses.

Figure 1 reveals higher student performance in the traditional courses, with fewer students earning D's, E's, or Withdrawing han in the flip-hybrid courses. Because the D, E, and Withdraw numbers were small, these groups were collapsed and considered together because grades of D and below do not transfer or allow students to enroll in upper level courses.

An inspection of Figure 1 reveals that the performance levels for the traditional group and the flip-hybrid group are not normally distributed; the traditional group is skewed, while the flip-hybrid is an inverted curve. The Levine's Test confirms a lack of homogeneity in between group significance for A's, B's, and D/E/Withdraws ($p = .001$). The Levine's Test for between group difference for C was not significant ($p = .069$). Due to the between groups design, the independent nature of the two groups, the ordinal levels for performance data, unequal variances, and violation of the assumption of normal distribution; the Mann-Whitney U Test for nonparametric analysis was used to determine if observed differences between groups for student performance was statistically significant (Morgan et al., 2007). The traditional group (163 students) had a significantly higher mean rank for A (180) than the flip-hybrid (149.2), for B (172.8) vs. (156.3) flip-hybrid, and students in the traditional courses had a significantly lower mean rank for D/E/Withdraw (143.6) vs. (185.1) of flip-hybrid courses. These results were statistically significant (asymptomatic 2 tailed test) for A (U = 10922.5, $p = .001$); for B (U = 12094.5, $p = .036$); and for D/E/Withdraw (U = 10037.5, $p = .001$). There was no significant difference between the two groups for C (U = 12978.5, $p = .364$). The conversion formula ($r = {}^{z}/\sqrt{N}$) was used to determine the following effect sizes (Morgan et al., 2007). The effect size of the differences between earning A grades between the two groups ($r = -.28$) is a small effect size; for differences between B's, ($r = -.16$), again small. Effect sizes were not calculated for C grades due to the lack of statistically significant differences between the groups for earning C's. The effect size for D's, E's, and Withdraw (r = .44) are in the median range of (r = .33 - .55) according to Cohen (1969 as cited in Morgan et el., 2007).

The Blackboard™ Learning Management System software revealed that some proportion of students in the flip-hybrid group did not watch the assigned videos and were thus unprepared to apply the information in face-to-face activities and tests. When allowed to submit assignments late or to make-up tests, few students completed the assignments/tests and those that did, often performed poorly. Unfortunately, this data was not tallied across the semesters as the decision to compare the course designs was made after all courses were completed. As with traditional classes, some students did not attend class, submit papers, or prepare for in-class tests.

Course evaluations completed by students in this study mirrors the student performance outcomes, with students in flip-hybrid courses reporting noticeably less satisfaction than students in the traditional courses. Others have reported similar findings:

> "Many students have done well receiving information and spitting it back out. While some come to embrace the flipped classroom, others never do. … The average score on a student evaluation of a flipped course is about half what the same professor gets when using the traditional lecture" (Berrett, 2014, p. 5).

Discussion of Findings

The flip-hybrid classes were designed with the rationale that students could have as much access as needed to learn the content with the video lectures available outside of class, rather than the one-time opportunity of the class lecture. Assigning videos outside of class is a recommended pedagogy, especially for underprepared students (Degrazia et al., 2012; Boud, Lawson & Thompson, 2013). Video lectures consisted of narrated powerpoint™ slides with several sentences appearing consecutively with several visuals on each slide. The video lectures include more visuals and diagrams such as brain structures etc., than were used during face-to-face lectures where the instructor created white board drawings and briefly reviewed overhead pictures/graphs. Powerpoint™ notes were provided for students to print, with space for students to write additional notes. An outline of the lecture topics was made available for students in the traditional course sections to print. The flip-hybrid courses in this study required twice as much independent (outside of class) work, because these courses met for half as much time face-to-face as the traditional course. This study concludes that when direct instruction was shifted out of the classroom, student performance dropped in comparison to the traditional teacher-centered courses, with specifically fewer A's earned and more D's, E's, and Withdrawals. With student-centered methods students cannot passively hide in the back, text or surf on-line, or nap during class; a reason some students dislike flipped instruction (Restad, 2013). "While Proponents say flipping is a more

effective technique than a traditional lecture, many students chafe at it" (Neshyba, 2013, p.1). Despite strongly endorsing flipped college instruction Talbot (2014) warns teachers to expect:

> "a nontrivial amount of pushback… because students have acclimatized to the lecture model. Changing this model violates their expectations and introduces a lot of uncertainty and conflict can be a coping mechanism" (p.15).

Implementing student-centered learning provokes significant student opposition and resentment associated with student perceptions of appropriate educational activities. I.e., "I am not paying tuition to teach myself!" (Nilson, 2012; Restad, 2014 p. 13; Seidel & Tanner, 2013). Instructors need to explicitly train and guide students through learning for students to be successful, while at the same time they are teaching course content. This explicit training of how to learn is even more critical for students in flip-hybrid courses. (Farrington et al., 2012).

Discerning best teaching methods in community colleges is critical because more than half of all college students in the United States begin higher education in a two year setting (U.S. Department of Statistics, 2013).

> "… just 20 percent of students who start community college complete their programs three years later. In addition, while 80 percent of students entering community college plan to earn a bachelor's degree, only 15 percent do so within six years" (Roach, 2014, p. 1).

With the demands required to gain independent learning skills, too many students may not devote the time and effort to complete student-centered college courses. "A significant number of professors try it, struggle, and quickly revert to straight lecturing" (Honneycut et al., 2014, p. 18). Because, in addition to the concern of student's expectations of instruction, national research concludes that 43 – 60 percent of incoming college students are academically underprepared (Doubleday, 2013; McClenney, 2013). Approximately 20 percent of community college students test into developmental reading, writing, or mathematic courses (Parsad & Lewis, 2003). These reports reveal that many students are underprepared for college, as well as not having independent learning skills, and not understanding that they do not know how to learn on their own (Farrington et al., 2012; Gabriel, 2008). College learning requires explicit study strategies to be vigilantly employed, and learners need to find ways to sustain their efforts over time (Shibley, 2014). After summarizing the answers to the test questions while completing reading assignments, less skilled readers perform significantly better on exam questions (Nilson, 2013). This is an important finding when more than half of the less skilled readers rated themselves as highly skilled readers, indicating that they're unaware of their comprehension difficulties (Nilson, 2013). Students expect that teachers will guide them through sequential assignments, unpacking jargon, and explaining concepts with real life examples. Assignments must have specific, accessible, written quantity and quality parameters delineated. These expectations remain true for flipped courses, except that students are responsible for accessing much of course content outside of class, with instructional guidance offered via podcasts/videos or other on-line resources.

Blackboard™ (Learning Management System) reveals that about a third of students do not view assigned videos/read the text/complete the on-line tests (Neshyba, 2013). It is disappointing to discover that despite the investment in time and effort devoted to creating video lectures and interactive exercises to replace class lecture, students earned, D's and E's and withdrew at a significantly higher rate with significantly fewer of the remaining students' earning grades of A. As independent (outside of class) work in the flip-hybrid courses was magnified, student performance correspondingly declined in community college courses in this study. It would be easier, less stressful, and less time consuming to lecture in class and allow more opportunity to communicate enthusiasm for content. However, students would not have as much access to the lecture content, though students would have been able to ask questions during the lecture rather asking and receiving answers to questions via e-mail.

Diminished student performance coincided with enrollment patterns; students appeared to avoid flip-hybrid courses as well as to fail at higher rates when not avoided. Seven flip-hybrid courses of 165 students was compared with five traditional courses of 163 students because using an equal number of courses added a

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minimum of 60 more students to the traditional group, to make the groups unequal in size. Lower enrollment in flip-hybrid courses as an indicator of student resistance is speculative because satellite and on-line course sections were added to the schedule of courses, without deleting on-campus face-to-face course sections, with concomitant lower enrollment across all course sections. In a given semester two of 20 sections were flip-hybrid having lower enrollment, although each flip-hybrid course was the only General Psychology course section scheduled at a given time when courses usually fill, to encourage enrollment in these course offerings.

This study pinpoints a disconnection between the educational psychology literature calling for student-centered teaching to increase student outcomes and the consequent lower student performance and amplified student dissatisfaction with this course design. For example, Talbot (2014) states that flipped instruction:

> "supports competence and problem-solving skills that will help students in future classes and their careers … just having someone tell you what to write on a test isn't enough" p. 15).

A comparison of student knowledge of course content several years after completing both traditional and flipped courses is recommended to determine if there are long term gains for those experiencing flipped instruction that might offset findings of lower immediate student performance. Talbot (2014) encourages teachers that attempt flipping

> "not to give up hope and not to beat a hasty retreat [because student who are rebelling are] primed to learn something about learning, and about the value of learning versus the value of grades" (p. 16).

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Supportive Education for Returning Veterans (SERV): An Evidence-Based Curriculum

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Abstract

The Supportive Education for Returning Veterans (SERV) curriculum has been able to retain and graduate ninety percent of the student veterans that complete the courses. The curriculum model includes credit-bearing resiliency orientation to full semester courses. Courses are cohort-based, learner-centered, and use a problem-based learning model that promotes a healthy support system as student veterans navigate their academic career.

Literature Review

Veterans face numerous challenges returning to college (Branker, 2009; Brito, Callahan & Marks, 2008; DiRamio, Ackerman, & Mitchell, 2008; Rumann & Hamrick, 2010). Retention and graduation rates vary considerably depending upon study (Cate, 2014; *Veterans Task Force Report*, 2009; Wilson, 2008; Wood, 2012). Further, student veterans are less likely to reach out to their instructors and engage in "co-curricular" campus life; these are important predictors of retention and graduation rates (National Survey of Student Engagement. 2010). One in five student veterans will suffer from some type of disability compared to one in ten traditional students and student veterans are six times more likely to attempt suicide than their civilian counterparts (National Survey of Student Engagement, 2010; Rudd, Goulding, & Bryan, 2011).

Resiliency is the ability of an individual to bounce back from life's adversities and deal with these stresses in healthy ways (Brooks & Goldstein, 2003; Reivich & Shatté, 2002; Siebert, 2005). Resiliency characteristics can be taught effectively in a classroom setting (Lifton, Seay & Bushko, 2000), and the development of appropriate resiliency attitudes can facilitate college adjustment (Mathis & Lecci, 1999) and lead to an increase in retention and GPA (Maddi, Khoshaba, Jensen, Carter & Llui, 2002). Measures of resiliency have been found be to effective predictors of retention (Lifton, Seay & Bushko, 2000). Resiliency training diminishes the risk of the development of Post-traumatic Stress Disorder (PTSD) (Bartone, 1999). Moreover, resiliency characteristics and the development of an adequate support system can be protective factors in preventing PTSD (Bonanno, Galea, Bucciarelli & Vlahov, 2007; Brewin, Andrews & Valentine, 2000).

Recognizing the benefits of resiliency, the Supportive Education Programs for Returning Veterans (SERV) program of studies was developed to successfully transition returning veterans into an academic setting by establishing an academic and social framework to foster resiliency. Such interventions do not pathologize the veteran's re-adjustment, but instead focus on reintegration, resiliency, and educational practice in academic settings (Friedman, Resick & Keane, 2007).

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Methodology

The curriculum is presented to participants as a contiguous block of three courses whereby a Resiliency course occurs first, followed by a Learning-Teaching course, and finally a Leadership course. Each course is separated by about thirty minutes allowing the learners to socialize, summarize, and prepare for the next class. A cohort-based social framework is used in all of the courses whereby the entire class is composed of veterans. A curriculum specific text, Scholars in Camo, is used for all three courses, as both a personal journal for the learners and as a basis for presenting instruction. Importantly, the courses "count" toward the participant's degree program as necessary general education (gen ed) courses.

The goal of the Resiliency course is to understand, assess, plan, and apply resiliency practices that manage stress in a manner that fosters academic, personal, and professional development. The Learning-Teaching course is a twist on the typical academic preparation-type courses in that this course looks at learning through the "eyes" of an educator rather than through the eyes of a learner. Finally, the Leadership course is intended to build upon the concept of post-traumatic-growth, to apply knowledge, behavior, social influence, and decision-making to develop a greater sense of self-awareness and recognize the potential of transformational experiences, such as those that occurred in their military deployments (Bennis & Thomas, 2002). This approach encourages veterans to view their traumatic experiences as an opportunity for growth (Calhoun & Tedeschi, 2006; Meichenbaum, 2006).

Initial questions regarding the SERV program were: could student veterans make significant resiliency improvements within the span of one semester; do student veterans perceive the curriculum as providing them with the ability to be successful learners; and what can be determined regarding persistence and retention? Results showed significant pre-post resiliency scores using generalized resiliency tests. Cohorts were unanimous in affirming the curriculum provided the underpinnings for successful transition leading to graduation. Subsequently, ninety percent of the student veterans who completed the curriculum have remained in school or graduated (Markel, Trujillo, Callahan & Marks, 2010).

While the nine credit hour, three course curriculum yields desired results, limitations of the GI Bill preclude many student veterans from participating in the program simply because they have already accrued their gen ed credits. Hence two other courses have been developed. Transitional Resiliency is a three credit compressed version of the larger nine-credit block course (Callahan & Marks, 2010b) and Resiliency Orientation, an outgrowth of research done with first responders (Callahan, Marks & Grill, 2013). The Resiliency Orientation poses the challenges of compressing a one-semester resiliency course into a one or two day program while still showing comparable resiliency gains and persistence.

Like the semester-long resiliency course, a major goal of the Resiliency Orientation course is for participants to develop skills that will help them create healthy social support systems. (Erich, 2014) with the understanding that a healthy support system is one in which an individual both "receives" and "gives" (Callahan, Marks & Grill, 2013). A problem-based-learning approach with ten-minute content components allows participants to learn twelve progressively more complex resiliency skills that are ultimately focused on developing and sustaining a social support network. Ongoing research with first responders has shown significant pre-post resiliency gains and sustainment when measured at three months (Gunderson, Grill, Callahan & Marks, 2014).

The elegance of the succinct Orientation Resiliency course is that it can be provided prior to students first full semester thus encouraging the development of a social support network and the genesis of a study group. The course allows students to begin the first semester with potentially a 4.0 GPA thus addressing self-efficacy. And, finally, it empowers the student by serving as a decision instrument to determine if additional coursework through either Transitional Resiliency or the nine-credit block of courses is desired.

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Conclusion

The Supportive Education for Returning Veterans (SERV) curriculum serves as the first steps in academic transition for returning military veterans through a resiliency-themed program of courses. Sustainment of these individuals follows through the social support networks developed in these courses, through the on-campus presence of the Veterans Administration mental health services and on-campus vets center. As a result, SERV has been able to retain and graduate ninety percent of the student veterans that complete the courses. Yet, all college students are potential candidates for such programs as SERV. Students enter higher education with higher levels of stress than ever (Pope, 2001) and are reflected in our own state's (Arizona) disappointing rankings in the number of high school graduates who enter post secondary education and do not complete (Ryman, 2013). We envision being able to train all incoming freshman as well as high school seniors and their parents as these students transition to college.

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An Integrated Approach to Reduce the Practicality, Productivity, and the Propensity of Cheating on Asynchronous, Objective, Online Assessments

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Abstract

We profile an approach to reduce, with the goal of deterring, cheating on asynchronous, objective, online assessments. We survey technological and social solutions to academic dishonesty, integrating some into a tech-centric, socially-sensitive pedagogy that was delivered via the Canvas LMS. The design engages select tech tools, within a social context grounded in the testing effect, to minimize the practicality, productivity, and hence, the propensity to cheat. Data from 229 students spanning 8 classes found strong indication of students' perception of the resulting uselessness of cheating. We highlight the implication to test anxiety, student engagement, learning effectiveness, and workflow efficiency.

Introduction

Cheating has long-dogged evaluation. Few dispute, no matter whether the context is online or in-class, the persistence and prevalence of academic dishonesty. Safeguarding academic honesty, along with tangential implications to student engagement, learning effectiveness, and workflow efficiency, fan escalating concern. Preemptive efforts increasingly fall short and cheating, always a problem, is now "reaching virtually pandemic proportions" (Bing, Davison, Vitell, Ammeter, Garner, & Novicevic, 2012:28; Beck, 2014).

Preventing cheating on asynchronous, objective, online assessments elicits a range of remedies. Some advocate fighting fire with fire, reasoning that technological countermeasures deter opportunism. Recommendations run the gamut, from low-tech (i.e., time-stamping, password activation) to high-tech options (i.e., video surveillance, biometrics, keylogging). Others champion righteousness, advocating social methods that, by amplifying "teacher presence" through systematic announcements, frequent feedback, and engaging posts engineer ethical consciousness. Social methods, by personalizing the otherwise anonymous teacher-student relationship, feasibly foster social deterrents.

Independently, tech tools and social methods provide powerful techniques. Still, regulating online evaluation challenges each. Students' cyber-dispersion creates potential for illicit search or collusion; checking these temptations through technology quickly hit operational and cost boundaries. Likewise, relying on social methods faces limits as well. Inspiring ethical consciousness imposes time-intensive, ambiguous obligations upon an instructor. Online classes, applying cyber-based relationship-building strategies, struggle to mimic the social processes that mark those found in a face-to-face classroom. Ultimately, the sobering data on the prevalence of cheating confirm complications bound the effectiveness of tech tools and social methods.

Mindful of these challenges, we design and test a systematic, tech-based, socially-directed pedagogy with the goal of preempting the propensity to cheat while concurrently improving students' class engagement and learning experience. While not advocating tech-determinism, our design is tech-centric given the belief that technology is essential to deter academic dishonesty. However, the persistence and prevalence of cheating indicate that tech tools are ultimately inadequate. This limit led us to engage complementary social

methods with the aim of confronting students' perception of the practicality and productivity of cheating and, ultimately, diminishing their propensity to cheat. Successfully designed, this blended pedagogy spurs students' realization that it's easier to complete an assessment independently than it is to cheat—to say nothing of the intrinsic reward of respecting ethical standards and earning academic achievement legitimately. Hence, our goal is straightforward: develop and test an integrated approach that effectively blends tech-tools and social methods in an administratively efficient, scale-insensitive pedagogy to decrease cheating while simultaneously improving a student's course engagement and learning experience.

Mapping the Integrated Model: Figure 1 maps our general model. Design and delivery components, based on the preceding discussion, define Phase 1. Phase 2 turns our attention to the issues to test anxiety and the testing effect. Besides pervasive, significant, and escalating, test anxiety fans a pathology of problems, usually escalating the propensity to cheat or collude on evaluations (Hembree, 1988). Operationally, we manipulated several tech tools to develop social methods to diminish it. Our manipulations follow reports in the testing effect literature that students acquire and retain knowledge more effectively by being tested on it, rather than additional drilling or repeating lessons. Effectively, the option to take and, if motivated, retake a quiz enables a student to calibrate comprehension, preempt overconfidence, promote competence, sustain engagement, and fortify learning. These outcomes, in turn, reduce the performance anxiety that often spurs cheating (Brown, Roediger, & McDaniel, 2014).

We operationalize the testing effect via the instrumentality of the test-retake option. Students had the option to take a quiz multiple times; once was sufficient, but they could retake any quiz, up to 5 times. Operationally, we configured the Canvas LMS quiz algorithm to tap questions from various questions banks to generate a different set for each quiz attempt—hence, and quite critically, each quiz iteration presented a different set of questions to a student. With regard to cheating on online, asynchronous objective evaluations, we reasoned that reducing its productivity and practicality without sacrificing the advantages of the testing effect has a clear mandate: radically decrease the probability that classmates, taking an online quiz serially or sequentially, have the same test with the same questions in the same sequence at the same time. Extending this solution beyond a single course called for reducing the usefulness of copying, sharing, or archiving questions. Effectively, the search for a question, whether in hard copy or via an online archive, must be inordinately difficult. To these ends, we developed approximately 6.500 test questions that then were organized into a series of deep, broad question banks.

For our purposes, we configured the Canvas LMS quiz algorithm to (1) regulate the scale, scope, duration, and window of a quiz, (2) auto-generate, upon student demand, a unique quiz based on randomly selecting questions listed in various question banks, (3) shuffle responses per question, (4) administer the take-retake procedure, (5) report immediate feedback to the student that identified and presented an explanation of the correct answer, and (6) record a student's highest quiz grade, irrespective of its slot in the quiz sequence, as the final score.

Methodology

*Sample***:** Data was collected from 7 sections of an introductory course on international business at a public university in the northeast United States; 229 students comprise the sample. Sections ran between January 2014 and December 2014. Four courses were delivered exclusively online, 4 were hybrid formatted; 6 sections included Undergraduates; 2 included MBAs. The same instructor taught all sections.

Question Banks: Two sources contributed questions to the banks. One, the lead author generated approximately 3,000 multiple-choice questions. Two, we tapped the test bank provided by the publisher of the assigned textbook; the author of this paper is a coauthor of that text. It is presently in its 15th edition; the publisher has enlisted experienced test question writers to build and refine this resource for many years. We amended these questions by adding feedback.

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*Data***:** Student completed two types of quizzes per assigned chapter. One type, "Core Concepts Check," tested their mastery of chapter content. The other type, "Critical Thinking Scenarios," tested their ability to apply their understanding of the material to interpret hypothetical scenarios. Students completed 10 chapter-based quizzes. Questions included specific feedback explaining why an answer was correct. Each 20 question quiz determined 5% of the final grade. All quizzes were delivered online. A student engaged a quiz "anytime, anyplace" over a 3 to 5 day window. In addition, at the start and end of a course, a student completed online surveys regarding their expectations of and then experience in the class.

Results

We assess the frequency distribution of responses to various survey measures. We relied on Likert-style items; Strongly Agree and Strongly Disagree bounded the scale. Response rates averaged 96% across all sections (high of 99%, low of 94%). On average, each class provided 12-18% of the survey data.

Table 1 shows that the vast majority of the students agreed that the option to retake a quiz reduced the practicality, productivity, and hence, their propensity to cheat. Notably, 92% of the respondents agreed that the option to retake a quiz made it "easier to do my best on my own rather than making the effort to cheat on a quiz." Regarding practicality, most concluded that it would be difficult to share questions with classmates. Most regarded retaking a quiz as representing an easier choice than colluding with classmates. Table 2 reports the students' view on aspects of the testing effect, test anxiety, and class engagement. The vast majority of students consistently agreed that the reported pedagogy, particularly its take-retake option, minimized test anxiety, developed a stronger understanding of class materials, made the class a more effective learning experience, and motivated them to work harder.

Discussion

Making Cheating Impractical: Surveys, interviews, and class experience suggest that decreasing the practicality and productivity of cheating requires (1) reducing the odds that classmates, taking the quiz serially or sequentially, have the same test with the same questions in the same sequence at the same time and (2) disrupting the efficiency of sharing questions by making the search process transactionally difficult and inordinately futile. Our findings suggest that this two-pronged effort, directly operationalized by developing extensive banks of test questions, encouraged the realization that cheating was impractical and unproductive.

An Effective Evaluation Process: Opportunities for multiple quiz attempts, by leveraging the testing effect, enhanced the effectiveness of the evaluation process. Data indicate that the option to retake an exam, in line with the testing effect, reduced test anxiety, promoted active learning, and encourages conscientiousness. Correspondingly, it reduced the propensity to cheat.

An Administratively Efficient Pedagogy: Students positively interpreted a course organized by the model depicted in Figure 1. The robustness of the LMS supported an administratively efficient pedagogy that students indicate enhanced their engagement and educational experience. Practically, the LMS made tasks, many of mind-numbing complexity, straightforward.

Conclusion

Our findings suggest that blending tech tools and social methods to challenge the practicality and productivity of cheating persuaded students that it is more efficient and effective to complete a quiz independently than to resort to cheating. Students report that forsaking cheating, given the test-retest option, reduced test anxiety, tapped the testing effect, and promoted a deeper understanding of the material. Hence, our results identify a promising path to safeguard academic honesty through an administratively efficient, scale insensitive, pedagogy that also improved student engagement and learning effectiveness.

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Figure 1: The Research Model

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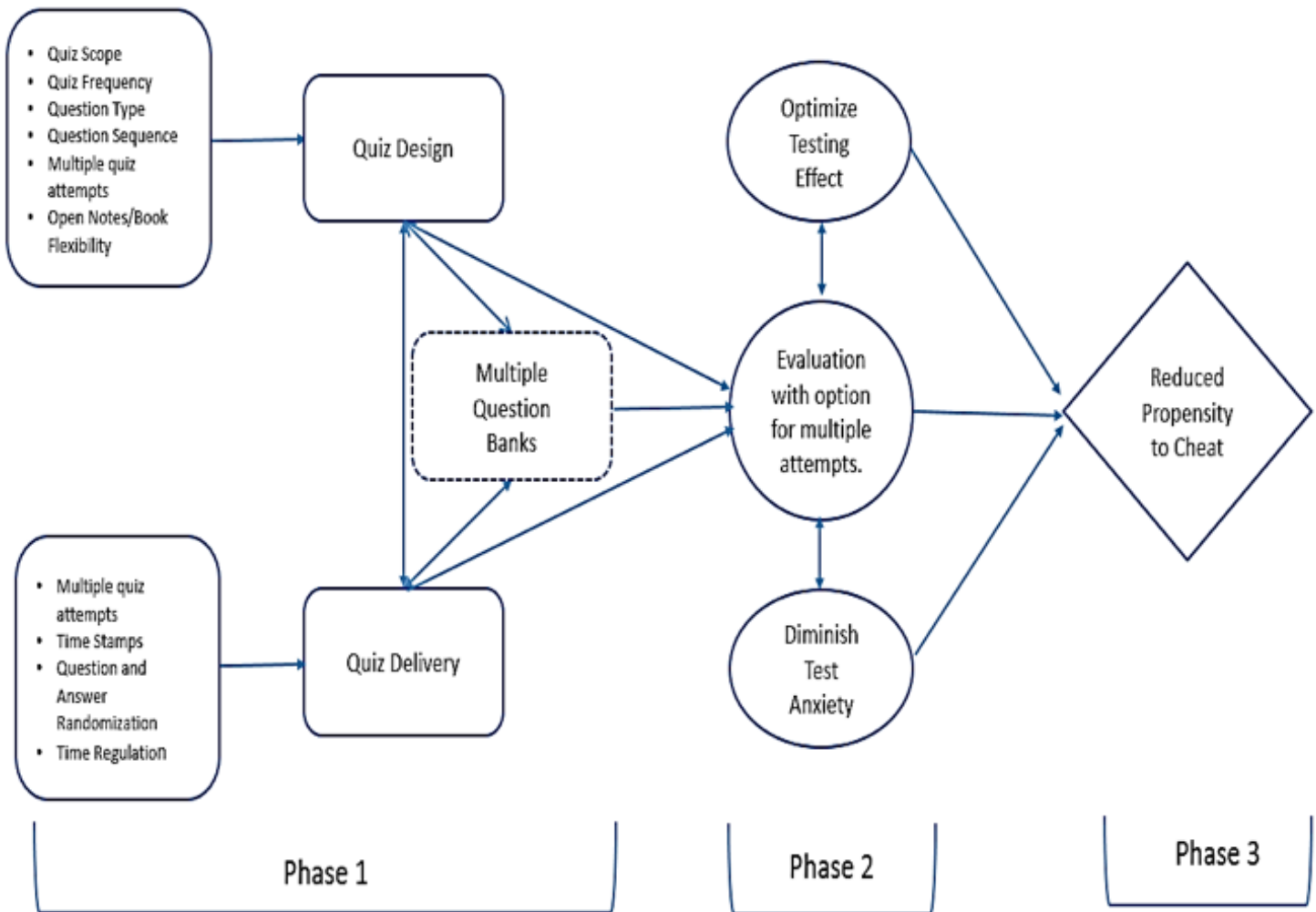
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Teaching Evaluations: Driven to Drink or Reflective Practice?

Judith Ableser - *Oakland University*

This interactive session will help faculty use their teaching evaluations for reflective practice to improve of their teaching and to develop a strong case for tenure. Examples of multiple types of evidence of teaching will be explored, highlighting research findings on their strengths and limitations. Best practices will be outlined for the effective use of these documents. This session will be beneficial for emerging faculty as they begin their tenure case and for department and tenure chairs who support their faculty through annual and tenure reviews.

Role of Courses Developing Life Skills for Middle School Students

Galya Al Sulim and Taiba Alzenede - *Al Imam Muhammad Ibn Saud Islamic University*

The problem of this study identified in the main question: What is The Role of Science Curricula in the development of Life Skills for Intermediate School Students? Throughout the study the researchers used the descriptive analytical methodology, as well as analyzing the content of science curricula of the first year intermediate school, then developed a list of life skills, based on them they built the tool of context analyzing, then designed a testing of life skills, where it was applied on the sample of the study which included (118) student, then collected the data and statistically analyzed.

The "Reverse Lecture" or "Flipped Classroom" in a Professional Pharmacy Course

Christian Albano and Scott Hordesky - *Concordia University Wisconsin*

Being mindful of the different types of learners and understanding that teaching is both a science and an art sets a vibrant stage conducive for teachers willing to utilize the "flipped classroom." It could allow for more time on higher order thinking based on Bloom's Taxonomy, which has been reported as a benefit of this teaching style while serving as an effective content delivery method. The main objective is to analyze the results of the survey assessment that evaluated the reverse lecture. Overall, the results indicate that a well-developed, organized and managed flipped classroom can have positive student outcomes.

Incorporating Service Learning in a Small Group Communication Course

Kenneth Albone - *Rowan University*

Our institution recently received research institution status. As such external funding and research by faculty are now goals. My research project is to develop a service learning component to an established small group communication course. As such, I will be contacting community entities who might be interested, developing the criteria for the service learning assignment, and determining ways to assess the assignment. I will also, with the aid of the grants office, seek external pedagogical funding to help with the research. The goal is to begin this assignment in Fall 2015.

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Plenary Presentation: Supporting Faculty Inquiry About Teaching: Implications for Teaching and for Curriculum

Cheryl Amundsen - *Simon Fraser University*

Faculty inquiry can be used to build both individual knowledge and to engage in teaching as a socially situated activity. Simon Fraser University has designed a leading program to support faculty inquiry based on questions they have about teaching and learning. Inquiry projects can be used to: (1) investigate the effectiveness of a new teaching approach in a particular course (e.g., team-based learning), (2) focus on designing and piloting an instructional tool (e.g., website to illustrate historical thinking), and (3) support curriculum development. In this plenary session, selected findings from our program evaluation will be shared with a goal of stimulating thought regarding how this approach can be used in your own teaching.

Sharing Online Teaching Technology Tools

Lynne Anderson - *National University*

The author will briefly present findings over the past two years of incorporating those technology skills in graduate and under-graduate course design and instruction of teaching skill development. Findings of adjuncts who did similarly as they taught with technology-assisted learning tools in online delivery of instruction in said course will also be shared. Moreover, the important part of this workshop will be for participants to share their teaching experience of technology-assisted teaching tools within the group of attendees. Its purpose is to gain confidence and tech skills in teaching and online course design so as to gain learning effectiveness.

Promoting Independent Learning and Thinking

Mary Antonaros - *Siena Heights University*

Research indicates that learner-centered teaching leads to increased student engagement with content as well as increased student learning and long-term retention (Blumberg, 2008). Learner-centered teaching is an approach that focuses on student learning, rather than what the teacher is doing. Its teaching methods utilize a variety of approaches that shift the role of the instructor from the provider of information to facilitating student learning. This session explores the literature on this topic and discusses the myriad learner-centered teaching methods that can be implemented in any classroom.

Professional and Personal Self: Preparing Educators for Diverse Settings

Heljä Antola Crowe and Robert Wolffe - *Bradley University*

The presentation focuses on learning actively about diversity. Participants will articulate ways to build a welcoming environment for all students. Workshop delivery is collaborative, participatory and socially engaging, combining the challenges of developing both professionally and personally. Theoretical bases will be explained through cross-cultural competencies, best practices, research on social-emotional learning and reflective practice. Focus will be an awareness of culturally savvy teaching and intentional course design where teacher candidates' own experiences, and their future profession are at the center of reflection. Collaborative activities will be analyzed and reflective practice emphasized as a positive by-product of learning.

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Initiating, Implementing, and Assessing a Pilot Faculty Learning Community on Collaborative Service Learning

Amelia Barili - *University of California, Berkeley*

Our faculty learning community (FLC) is a group of trans-disciplinary Senate and Non-Senate faculty, a graduate and an undergraduate student, who share an interest in enriching students' learning by having them apply academic knowledge to meet real community needs. We are working together to examine, develop, and assess, collaborative service learning activities in six upper division courses. We are also exploring ways to expand this course-level pedagogical innovation to other courses in our departments and potentially to other departments as well. I will describe how this FLC came together, how it thrives, and will share tips on how to move forward in similar projects.

Lessons Learned from Competency-Based Education that Enhance Teaching Practice

Tim Becker, Gale Mazur, and Cathy Margolin - *Brandman University*

Is competency-based education (CBE) the solution to many criticisms of higher education such as being too expensive and not preparing students for the real-world? The Department of Education and many educators believe CBE is a good alternative as it confers a degree to students who can demonstrate competence. From actively participating in the development of a competency-based BBA degree, three Brandman University faculty will share their experiences and discuss how CBE has enhanced their teaching practice in the traditional and online classrooms. Understanding the impact and implications of CBE is essential to remain competitive and ensure student needs are being met.

LMU's Keck Post-Doctoral Development Program

Curtis Bennett - *Loyola Marymount University*

In 2012, through the generosity of the W.M. Keck Foundation, Loyola Marymount University started the W.M. Keck Foundation Postdoctoral Fellow and Faculty Development Program. The program provides training for postdoctoral fellows focusing on their professional development as teacher-scholars at a primarily undergraduate institution. Keck Fellows receive mentorship in both classroom teaching and in conducting research with undergraduate students. In this presentation, we will provide an outline of the program, discuss the successes that we have had, the difficulties that we have faced, and how one might be able to incorporate a similar model at other primarily undergraduate institutions.

Solutions to Common Flipped Classroom Challenges

Amanda Brindley - *University of California, Irvine*

Flipped classroom instruction is an often discussed, and in many institutions debated topic. The method cannot be effective without addressing particular challenges. This can be especially difficult in lower division STEM courses where student motivation and skill levels are low. This presentation will very briefly introduce the flipped class method, and then focus on ways to avoid the common challenges that instructors new to the method face. These will include solutions for very small classes up to the challenge of lectures with 350+ non-major students where technology must be highly integrated into the classroom setting.

Plenary Presentation: Lightening Struck the Classroom, and We Kissed Convention Good-Bye

David Brobeck - *Walsh University*

Are you ready to challenge convention and step towards something different? Imagine… your classroom is buzzing loudly from student interactions. Suddenly the entire room responds instantly to your call back. As you continue to deliver critical ideas, students are loving the learning. Reality? Yes! This highly interactive presentation will combine key aspects of cooperative learning with research-based cognitive learning theory using the whole brain and body. Design, modes of engagement, and idea testing all have important roles while developing exemplary instruction. Participants will have fun learning, then depart ready to test strategies that are positive, engaging, and effective.

Building a "Culture of Excellence" with the Millennial Generation

Tannah Broman and Kristin Hoffner - *Arizona State University*

Is it possible to establish a culture of excellence with a generation of students who expect constant feedback and reinforcement, who have been consistently told by parents and media they are "special", and who have been sheltered from disappointment and failure? Yes! With consistent messaging of expectations, student/teacher relationships built more on mutual respect than traditional authority, and evidence-based active learning strategies tailored for a team-oriented generation, these students can rise to meet any challenge. This presentation will explore how to work with Millennial traits to build a "culture of excellence" in which students and teachers alike can take pride.

Plenary Presentation: Getting Students to Participate in Class

Stephen Brookfield - *University of St. Thomas*

There is nothing more dispiriting for a teacher than to face a class full of taciturn, seemingly disconnected students, many of whom feel they are entitled to an 'A' simply by showing up. In this plenary Stephen Brookfield will draw on over four decades of college teaching to present a number of specific techniques (verbal and visual) to involve students, along with the use of social media in real time. Behind all these techniques is the conviction that higher education classrooms need to be democratized by creating multiple opportunities for different kinds of students to be involved.

Can We Develop Best Practice Guidelines for Online Practice Exams?

Thomas Brothen - *University of Minnesota*

Changes in education at all levels regularly make the news. It is increasingly common to encounter stories about how MOOCs, flipped classrooms, and other online course delivery methods will change higher education forever. But higher education faculty can implement technology practices that are helpful to students without taking such huge steps. This round-table discussion will explore one specific technology that can be used more generally in courses—online practice exams. Information on how we created the exams and data on how our students utilize them will be the stimulus for discussion of best practices for their use.

Learning About the Brain and the Effect on College Students' Study Strategies

Deborah Brown - *West Chester University*

Sixty-eight pre-service teachers were enrolled in an educational psychology course that integrated brain-based learning content and had students apply this content to their own study habits and to classroom observations.

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Pre-service teachers' journal entries and reaction papers indicated that they employed several new study strategies as a result and changed their perceptions of effective teaching from the start to end of the course, citing more constructivist pedagogy by the end of the course and the need for teachers to teach their students about the brain. Most of this sample reported observing brain-based learning examples in a required field observation report.

College Level Reading: How Do Students Meet the Challenges?

Linda Bowen and Elizabeth Berry - *California State University, Northridge*

Launched in fall 2007, the Learning Habits Project at California State University, Northridge was designed to track, over a seven-year period, newly enrolled students who seemed likely to succeed at CSUN, based on their superior high school grades and placement tests. This unique study rests on rich qualitative and quantitative data that reveal significant information about student success at a large, diverse comprehensive university. One interesting aspect showed how students adopted new strategies in their approach to increased and higher level reading requirements. As a result, CSUN faculty have members created numerous tactics for helping students become competent college readers.

Using Positive Psychology to Encourage Adaptive Change in at Risk Students

Jennifer Buur, Dean Smylie, and Margaret Barr - *Western University of Health Sciences*

In the information age, successful learners must adapt to a constantly changing body of knowledge. They must learn, unlearn, and relearn in an efficient manner. However, most learners have not developed the skills required to adapt their learning strategies. Positive psychology postulates that humans are more likely to repeat positive behaviors than they are to avoid negative ones. This session focuses on the use of positive psychology to help learners build strategies for adaptive changing their studying methods. Simulations, discussions, and pilot study data will create an experiential learning opportunity designed to apply these concepts to practical and common situations.

Audio/Video Support for Laboratory Activities

Fabio Campi - *Simon Fraser University*

Students often lament the use of written tutorial documents in technical or scientific lab activities as boring and discouraging, while finding lab activities engaging. Yet, tutorials and manuals are indispensable to build the foundational competence on tools and procedures they need to even start the activity. A possible option is develop and offer collections of YouTube-like video tutorials demonstrating the usage of lab tools. While mostly not sufficient as full reference for lab activities, and not effective as long term learning methods, videos help students overcome the initial skepticism towards written documents, and ease their approach to lab material.

Exploring Flipped Teaching and Student Learning Outcomes

Sherri Chandler - *Muskegon Community College*

This presentation will review basic information describing the teaching method of the flipped classroom. Upon discussion of flipped teaching methods, research literature regarding student outcomes using flipped teaching methods will be summarized. Finally, a summary conducted by the presenter will be reviewed comparing of student learning outcomes of 100 general psychology students in a regular hybrid class to the learning outcomes of 100 general psychology students in a flipped hybrid course.

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Formative Assessment: DIY e-Portfolios

Scott Christian and Jason Ohler - *University of Alaska, Southeast*

Effective teaching requires faculty to monitor and assess student learning throughout the learning process. In this session, we will briefly explore some of the current research regarding formative assessment and effective feedback. We will use our findings from this discussion to explore and critique a variety of Web. 2.0 tools that do not require a proprietary device (like clickers). Faculty will explore these strategies and tools in the role of students performing formative assessments. We will also examine academic e-portfolios created by graduate students in a Master of Arts in Teaching Program. Faculty will then have the option of building a formative assessment (check for understanding) or a beginning e-portfolio using Web 2.0 cloud-based tools. These tools and strategies provide easily accessible and user friendly alternatives to tools and services provided by institutions.

School District/University Partnerships: Moving Teacher Leadership Forward in the 21st Century

Ann Clapper and Thomas Hall - *North Dakota State University*

Effective school leadership is a key factor in improving schools and ensuring academic success for all students but questions have been raised about whether or not current university preparation programs are providing candidates with the opportunities needed to master the skills required for success as 21st-century school leaders. Educational Leadership program faculty members responded to this concern by designing and implementing a Leadership Academy Model in partnership with a local district. This session will address the research behind the academy model project along with the benefits and challenges of this unique university/ district partnership.

Considering Threshold Concepts Across California Community Colleges and State Universities

Kimberly Costino and Nika Hogan - *California State University, San Bernardino and Pasadena City College*

High Schools are adapting to the new Common Core State Standards, community colleges are revising their approach to developmental education, and both 2 and 4 year colleges are assessing programs and curriculum in light of new demands for 21st century education. There is a sense of urgency to align expectations and outcomes across levels. This workshop introduces participants to The Threshold Project, a California statewide community of practice supporting long-term, collegial, sustained learning and dialogue—across disciplines and across educational segments—about how a focus on threshold concepts can inspire us to reconsider our curricula and our approach to "alignment."

Getting Student Buy-In for Student-Centered Learning: Recommendations from Implementation Science

Milt Cox - *Miami University*

Implementation Science research provides recommendations for instructors who are attempting to put evidenced-based interventions into effective practice. For example, if you want to use cooperative learning groups, a well-known evidenced-based practice, then how do you get students to engage this approach in a meaningful way? You can provide the evidence that these groups enhance student learning, but how do you get students to participate effectively? Other evidenced-based teaching / learning examples such as flipping the classroom can be substituted here. In other words, how do you get SoTL-based practice to be accepted and adopted by students?

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Games, Learning, and Assessment as Tools to Engage and Motivate 21st Century Students

Latangela Crossfield, Rosalind Arthur, and Sandra Rucker - *Clark Atlanta University*

Changes in education at all levels regularly make the news. It is increasingly common to encounter stories about how MOOCs, flipped classrooms, and other online course delivery methods will change higher education forever. But higher education faculty can implement technology practices that are helpful to students without taking such huge steps. This round-table discussion will explore one specific technology that can be used more generally in courses—online practice exams. Information on how we created the exams and data on how our students utilize them will be the stimulus for discussion of best practices for their use.

Exploring Student Team Pedagogies Across the Higher Education Curriculum

Caroline D'Abate and Erik Eddy - *Skidmore College and Siena College*

Team-based work is infiltrating modern workplaces across industries and disciplines. The reasons for this are clear: team and group-based work results in a variety of meaningful benefits to individuals and organizations. The question is, though, how well are educators preparing students for the team-based work world that awaits them? This session provides a "state of the curriculum" report on current pedagogical choices related to student teamwork. Attendees will (a) gain a better understanding of current team-based teaching practices and (b) identify a set of tools that could be utilized for pedagogical development across the curriculum.

Consulting-Based Action Learning as an Experiential Education Option

Dana D'Angelo - *Drexel University*

Experiential learning can be accomplished through a broad array of programs, including computer simulated scenarios, case studies, service learning, internships and co-operative education. The authors conducted research in order to determine if the two forms of experiential education, consulting-based projects and co-operative education, provide the same perceived learning (skills and experiences gained that are applicable to their future careers and studies) for student participants. In addition to cooperative education, consulting-based projects can provide students with similar experiences for them to identify their own learning, skill building and professional development during their academic careers.

<u>Plenary Presentation:</u> The Darkside of Pedagogy

David Daniel - *James Madison University*

A quick review of the literature focusing on teaching strategies and instructional technologies yields a confusing and conflicting array of successful and unsuccessful techniques. Evidence-based strategies often fail to achieve promised outcomes when used in typical classroom settings. Students seem to find very creative ways to turn good pedagogy into tools that subvert learning. In this session, we will focus on how students USE pedagogical tools and technologies as opposed to using these tools in ways they are DESIGNED to be used. We will also discuss how to align student behavior with the intended learning goals by integrating the concept of affordances into the design and implementation of potentially promising instructional strategies in the classroom. Participants will be encouraged to recognize the importance and complexity of the teaching and learning context, as well as teacher's role in developing a more productive science of pedagogy.

Backward Design in Practice

Sierra Dawson and Eleanor Vandegrift - *University of Oregon*

As National Academies Education Fellows, we used the process of Backward Design to create a classroom activity incorporating goals, learning objectives, assessments, and activities. During this interactive workshop, we

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will share this activity, our "teachable tidbit," with participants. While sharing the activity, we will annotate with descriptions of our experience with the process of Backward Design. Then, participants will have an opportunity to explore how they can align goals and objectives with assessments and activities in their own classrooms.

Tips and Strategies to Improve Student Learning Through Examinations

Sierra Dawson and Jon Runyeon - *University of Oregon*

The goal of this workshop is to place a spotlight on how exams are used in the participant's courses, and to introduce strategies to increase the amount of learning that occurs through the examination process. The discussion will include various exam question types, the implementation of group exams, and grading paradigms that allow student to "fail" and learn from their mistakes, without failing the course. The workshop will be participant-centered and dynamic, and will include time for the participants to critique their current exam paradigms and map out changes they hope to make in the future.

Change the Way Education/Training is Done

Kristi Dean - *Central Michigan University*

The evidence-based teaching that I am seeing with my students, are they are coming to class to learn a specific skill or knowledge. They need to understand how computer software can help them in their daily life. My challenge is give the student what they want in terms of learning, every student is different.

Setting a Tone of Invitation and Expectation with Promising and Visually Appealing Course Syllabi

Matt DeLong - *Taylor University*

The syllabus is one of the first exposures that students have to a course, and so it provides an opportunity for tone-setting and socialization. Building on the evidence-based literature on syllabi (e.g., Fink, 2012; King, 2013; Harnish & Bridges, 2011), this session will focus on creating syllabi that are written and designed to enhance student motivation and engagement. Particular attention will be paid to using the syllabus to articulate the promise of a course (Bain, 2004), as well as on using layout and graphical elements to enhance communication and expectation.

Motivation and the Reluctant Online Learner

Daniel Duarte - *The University of Texas, El Paso*

Students are discovering that more and more of their courses are being offered online. Sooner or later students realize that they have to take online courses, although it may not be their intention to do so. The challenge to online instructors is not only to retain such students but to motivate them to be successful. While instructors play a primary role as motivator, specific assignments and activities can be employed to foster success and accomplishment. This poster provides a map that can be followed to motivate students intrinsically and extrinsically to succeed.

Improving Student Learning Through Faculty Peer Review

Helen Eckmann and Laura Galloway - *Brandman University*

This presentation will address ways to improve student learning through peer review. There is a growing need to establish peer review for adjunct faculty as universities are increasingly relying on adjunct professors. A peer

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review tool was developed over 18 months at Brandman University, in the Faculty Personnel Committee, with representatives from all five schools. FPC developed a process flow and forms to be used to measure the quality of instruction effectiveness to create feedback to adjunct faculty to improve student learning. Brandman University is a not-for-profit school with 27 campuses of over 15,000 students. The process flow and the forms will be shared.

Comparisons of Student Evaluations for Classroom, Blended Learning and Online Versions of the Same Course

Sari Edelstein - *Simmons College*

A leadership course in a four year college was taught in three different models. The first model was a classroom-based course, where students arrived in person for lecture led by an instructor. The second model consisted of a blended learning model, which consisted one half of the course presented in the classroom while the other half online. The third model allowed the students to experience the course only online. Students handed in their work through an online dropbox. Student evaluations showed interesting results with several pros and cons for each course model. Teaching methods for each model will also be presented.

Student Learning by Participation in Scholarly Research Articles

Sari Edelstein - *Simmons College*

Involving learners in collaborations of research articles slated for publication is an innovative pedagogical method that enhances student participation. For several semesters, we have incorporated student research and writing into defined topics and have been successful in peer-reviewed scholarly journal publication. Students entering the classroom where this pedagogy is present are excited to be a part of synergy that results is professional acclaim that they can put into their resumes and job interviews. As a result of our innovation, over 26 manuscripts have been published to date with student authors working with professor mentors in the classroom in this endeavor.

Developing a Writing Intensive Curriculum in a Business College

Susan Epstein - *Drexel University*

Drexel University embarked upon an accreditation-driven writing assessment in 2007 with a writing intensive pilot program. A six year study in the LeBow College of Business shows consistent and measurable improvement in student writing when using a 10 category rubric and both internal and external reviewers. Student writing samples in the test groups so significantly improved that the program was subsequently rolled out to all introduction to business sections, thus changing the culture within the department to develop writing, critical thinking, and problem solving skills as well as student confidence with regard to business writing.

Content Gamification and Flow

Beverly Evans - *Southeast Missouri State University*

This session will share information from a SoTL project where play elements such as competitive play, mimicry, games of fate and sensory play were used as a stimulus to promote arousal in a flipped classroom pedagogical model. Principles of gamification were used to create a flow like state of mind. Various play-learning activities such as gamified modules, scavenger hunts, in class competition, and dramatic activities will be highlighted. Procedures used to develop the gamified modules will be presented. Besides statistical data, implementation strategies and procedures will be detailed in this presentation.

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Living Storied Space: Fostering Critical Awareness for Faculty and Learners – Tools for Analysis and Action

Stephanie Fenwick and Sarah Visser - *Azusa Pacific University*

Participants from a mono-cultural background but who are seeking to develop skills for effectively engaging a highly diverse student population are encouraged to attend this session. This session will particularly benefit educators and practitioners who want to understand how their personal narrative intersects with institutional dynamics of difference and student learning engagement. This session examines how faculty members, staff, and administrators can intentionally foster reflection and analysis to develop critical awareness in an academic setting. Participants will leave with four interactive tools to be used towards growth and development of inclusive educational environments.

Engaging Digital Natives in the Social Media Age

Jose Fulgencio - *University of Central Oklahoma*

As digital natives, students enter college with an increasing knowledge of social media and internet usage. Digital natives are also digital learners, according to the 21st Century Fluency Series; students prefer multimedia information, and video to text. Digital natives want entertainment in their schoolwork. This session introduces conference participants to social media and multimedia tools available that foster student engagement. Key takeaways include learning effective ways to use social media in the classroom, engaging one-on-one through social media, and Social Media Tools 101 – learning the differences between social media tools such as YouTube, Vimeo, and Twitter.

Increasing Student Engagement & Learning with a Research Poster Project

Kathleen Gabriel - *California State University, Chico*

As professors, we strive to engage our students, and provide them with educationally purposeful activities that students find beneficial, relevant, and helpful for their future careers. For years, a traditional term paper has been used to accomplish these goals. In this session, an alternative will be presented: the Research Poster Project. This assignment can challenge and engage students in researching, writing, and presenting their project. Presenter will share the results of a study on the Research Poster Project (along with its directions and grading rubric). "Take-away skill": designing a research poster project for increasing student satisfaction, learning, and engagement.

Digital Assessment Strategies: Stretching the Limits of Student Learning

Brad Garner - *Indiana Wesleyan University*

This hands-on session will focus on the ways in which faculty, through intentionally designed assessment strategies, can help their students master course content while also engaging with digital technology through the use of creative, engaging assessment strategies. By embedding digital assessment strategies into course design, students can simultaneously demonstrate their knowledge and skills related to course content and also learn to perform transferable digital skills (e.g., creating websites, electronic portfolios, screencast, movies). As a starting point, this transition will require faculty to enhance their own digital skills and then develop strategies for linking course content with digital assessment tools.

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Incorporating Service Learning into Broadcast News Production Coursework

David Grannis - *California Lutheran University*

This presentation will discuss the lessons learned from my experience in incorporating a service-learning project into my Broadcast News Production class at California Lutheran University. The class produces a bi-monthly news show, featuring news, entertainment, sports, and human-interest stories, for our campus television channel and website. The closing segment that ends the show is a positive upbeat story often featuring something about Ventura County. My idea in incorporating service learning was to produce human-interest stories that benefit the local community and social service agencies.

Achieving Culturally Responsive Pedagogy Through Use of Cooperative Learning Groups

Shani Habibi and Robin Bishop - *Mount St. Mary's College*

How can we maximize the effectiveness of cooperative learning groups within our classes? More specifically, how can we use backward design to ensure that our groups address a diverse range of learning objectives? Finally, and perhaps most importantly, how can we do so in a way that maximizes the cultural responsiveness of our teaching for underrepresented student populations? In the current session, presenters will explore research, theory and practical strategies to address these questions. Participants will engage in structured group discussions as they connect their current practices with new possibilities.

Documenting Learning Across Three Capstone Courses in a Service-Based Learning Environment

Frauke Hachtmann - *University of Nebraska, Lincoln*

Students majoring in advertising and public relations have to complete one of three capstone courses, which all include a service learning component. They work in teams to develop an integrated marketing communications campaign for a real client using knowledge gained in other classes they have taken in the major as well as their general education courses. Students produce different documents that describe the research they conducted, the strategy they developed, as well as strategic creative executions. This poster provides evidence of student learning in three different capstone courses with the same learning outcome and describes how the department's program level assessment results were used to improve the curriculum leading up to the capstone course.

Wait..What? How to Engage Students in the Multi-Tasking Era

Chris Hakala - *Quinnipiac University*

Students believe they have a complete understanding of how to learn. Go to class, listen to the teacher, take the tests and you learn. However, recent research in the science of learning (Benassi, et. al 2014, Doyle & Zakrajsek, 2014) has suggested that there learning is far more complex. Student engagement is an umbrella term for factors critical for student learning in today's classrooms. In this session, we will discuss the research on student learning and engagement and share tips grounded in empirical evidence designed to provide a context for both students and teachers that is most effective for learning.

Redefining the College Lecture: Facilitating Discussions in STEM Undergraduate Courses

Catherine Halversen, Richard Freishtat, and Lynn Tran - *University of California, Berkeley*

Facilitating discourse in lecture courses, particularly in science, technology, engineering, and math (STEM), presents a challenging task. To improve learning outcomes of undergraduate students, this session engages

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participants in exploration, discussion, and practice with the integration of evidence-based active learning experiences. Drawing on an NSF funded faculty learning program designed to deepen faculty's understanding of learning and how to support learning, session participants will be guided through a process to support undergraduates learning, retain more of what they learn, and increase student intrinsic motivation to engage in STEM lecture courses.

Learning Connections – Creating an Interdisciplinary Course
Dorothea Herreiner - *Loyola Marymount University*

This session invites participants to explore some key steps of developing an interdisciplinary course and discuss course design challenges and opportunities of interdisciplinary courses.

How Operating from the Heart Contributes to Teaching and Learning
Oren Hertz - *Johnson & Wales University*

The purpose of this presentation is to connect us back with our hearts when we are engaged in the process of teaching and learning. Teaching and learning is often connected with the brain, as it is generally perceived to be a process of comprehension and measured levels of intelligence. However, there is scientific evidence that the heart has intelligence of its own, and there is a triangulated connection between the heart, the mind (brain), and teaching and learning. This presentation will explore this connection and learn how we can all benefit from it when we activate the heart intelligence.

What is Postmethod and What does it Mean for College and University Teaching?
Elaine Hewitt - *Granada University, Spain*

Traditionally, teacher training began with initiation into the various teaching methods available as well as practice into how to carry them out with students in the classroom. Recently however, for teachers and learners there has been a new movement away from the tendency of teaching methods and towards the notion of 'Postmethod'. One of the principal advocates of 'Postmethod' is Kumaravadivelu with publications such as Beyond Methods (2003). Some such as David Bell (2003) have asked if method and Postmethod are really so irreconcilable. Others raise objections to Postmethod. What are these objections? We take a look at what Postmethod especially means for college and university teaching.

Developing a Framework for Assessment of an Ed.D Program in Organizational Leadership
Len Hightower & Tami Capellino - *Brandman University*

The paper presented will cover the conceptual and scholarly foundation for experiential learning, more traditional methods of management and leadership education, their intersection in program elements, and the challenge of developing an appropriate framework for assessing such an integrated approach. Major program elements will be described, program learning outcomes will be shared, and current practices of assessment will be given. The strengths and limitations of current assessment efforts will be explored leading to a proposed new more comprehensive framework for assessment. Next steps in implementing a more comprehensive assessment and research of actual results and achievement of desired program and student outcomes will be outlined.

Designing Your Course to Blend Lifelong Learning Skills with Content

Erin Hill - *University of Washington, Bothell*

Too often, courses focus purely on learning discipline-related content and not on lifelong learning skills that will serve students throughout their college career, getting – and keeping – a job, and becoming a responsible citizen. These skills can be integrated into any course as a vehicle to construct subject-specific knowledge. To accomplish such a task with intentionality and clear expectations, learning goals and outcomes, and course assessments should be included that focus on lifelong learning. Participants will workshop such course attributes by creating or redesigning one learning goal, outcome, assessment, and learning experience for their chosen course.

WWU's Faculty Research-Writing Series: Support Toward Tenure and Promotion

Karen Hoelscher - *Western Washington University*

Interested in building a faculty-led writing support system to help assistant professors avoid what some call the "soul crunching experience" of moving toward tenure? Stop by this poster session to meet Karen Hoelscher from Western Washington University, who, since 2006, has facilitated the Faculty Research-Writing Series and Retreat. In monthly face-to-face meetings, between-meeting coaching, and a multiday off-campus retreat, they provide strategic guidance to (1) reflect on and work toward professional writing goals, (2) encourage dialogue about the challenges of writing for publication and moving steadily toward tenure and promotion, and (3) sustain the motivation to write among critical friends.

Engaged Academic Literacy for all with Reading Apprenticeship

Nika Hogan - *Pasadena City College*

Our students can read! This workshop will introduce participants to the Reading Apprenticeship instructional framework, which helps faculty learn how to build on students' underestimated strengths as readers and problem solvers and create instructional opportunities for "apprenticing" students into discipline-specific academic literacies. Teachers, schools, districts, and community colleges find that Reading Apprenticeship can produce a dramatic, positive transformation of students' engagement and achievement not only in literacy, but also in learning across all academic disciplines. The workshop will engage participants in the key routines by which they could bring metacognitive conversation into their classrooms.

Learn How Your Brain Learns

Scott Imus - *Midwestern University*

In this session, we'll discuss ways to help students better understand their metacognitive inaccuracies towards learning and elaborate on evidence-based learning. Students that are uneducated about proven learning and study strategies will not be able to make solid choices to improve in areas where they may be struggling. Effective learning strategies direct a critical part in students' academic achievement. One way to assist student learning is to offer training about the learning process. This interactive workshop will demonstrate how information goes from short term to long term memory with a very animated demonstration, along with a multisensory association exercise.

Process of Learning Model: Every Step of the Journey

Steve Janz - *Southern Alberta Institute of Technology, Calgary*

*T*he Process of Learning Model provides a step-by-step guide to develop an effective "flipped classroom." The Model was developed based on my observation of instructors at Harvard, MIT, University of British Columbia, and my own institution – Southern Alberta Institute of Technology Polytechnic. In this session you will learn

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the Process of Learning Model and identify ways this model may be used in your classes. The model presented will include strategies for providing students with a learning framework that includes pre-class work, in-class work, post-class work and assessment strategies. These methods work amazingly well and students have reported appreciating this approach.

Learning Statistics Through Excel Simulations and Hands-On Surveys

Chintamani Jog and Jeremy Oller - *University of Central Oklahoma*

This presentation proposes two pedagogical innovations in teaching statistics at the college level. The first involves using interactive, MS Excel-based simulations to illustrate the Central Limit Theorem. The second is a team-based, semester-long activity, wherein students create questionnaires on the topic of their choice, collect primary data, analyze and present basic results. We expect these methods to facilitate self-motivated spirit of inquiry among students, be a part of their e-Portfolios, as well as reinforce the practice of transformative learning. The generality and relative ease of implementing these methods across different disciplines will be an added bonus.

Learners on the Road: Facebook as a Tool for Community-Building in Group Study Abroad Programs

Dawn Johnston and Lisa Stowe - *University of Calgary*

Despite being dismissed by some experts as an aging demographic's social media, Facebook remains a favorite tool of university students, both socially and academically. This presentation examines the use of Facebook as a student-driven tool of formal and informal learning in a group study abroad program offered by a large research-intensive Canadian university. Our qualitative research project is informed, in part, by Rovai's (2002) Classroom Community Scale, and this presentation will argue that Facebook can be an integral tool in fostering a community of learners, particularly when students are studying outside the comfort zone of their home country and university.

Keep on Twearning (Twitter + Learning) into the Future

Ida Jones - *California State University, Fresno*

Research demonstrates that use of the one-minute paper can promote active learning, student engagement, and increased content mastery. Twitter is a micro-blogging tool that limits individual blog posts to 140 characters (plus photos and videos). In this presentation, the author discusses Twitter use in the classroom as the social media equivalent of the one-minute paper. Twitter use has resulted in some improvement in exam scores and according to one class of students, more engagement with the material and with classmates. It also increased students' awareness of law-related current events in sports.

A Hybrid Faculty Learning Community Approach for Hybrid Course Redesign

Cub Kahn - *Oregon State University*

Faculty learning communities (FLCs) dedicated to hybrid course redesign can be an effective way to support dissemination of effective hybrid pedagogy. This session will illustrate the structure and strategies of a campus hybrid pilot program for faculty development and redesign of traditional classroom courses as reduced-seat-time hybrid courses. The hybrid nature of the FLCs, which include online learning activities integrated with face-to-face meetings, will be explained. Two powerful course redesign planning tools, the blended learning mix map and hybrid course planning chart, and will be demonstrated, and participants will have the opportunity to apply these tools to their own courses.

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Promoting Engagement in the (Sometimes Very) Large "Lecture" Classroom

Lori Kayes, Devon Quick, and Jessica White - *Oregon State University*

Many studies have demonstrated that lecture is not always an effective tool for engaging students in the classroom and yet with large classroom sizes it is difficult for instructors to move beyond the reality of the lecture. In this session, presenters will review challenges associated with teaching in the large lecture and provide strategies that they have utilized to engage learners in classrooms ranging from 200 to 600 students. Presenters will discuss specifics of implementation, classroom management strategies, and evidence of past successes. Finally, they will discuss students' responsibility for thriving in the large lecture and ways to better prepare students for this environment.

Flipping the Public Speaking Course: Making Time for Actual Speaking

Rich Kessel - *Metropolitan State University of Denver*

The premise behind flipped classrooms seems well suited for courses in public speaking. By condensing lengthy lectures into short dynamic videos, classroom time can be freed for more developmental activities, such as dissecting good/bad speeches, speaking, and providing individualized feedback. While sound in theory, it has been surprisingly difficult in practice. As part of their class participation skill development, I have been engaging students in focus group-type discussions about the new approach. Their feedback on the videos, and how they use them, has important implications for the production of future videos and their integration into independent learning.

Effective Embedded Formative Assessment in Higher Education

Susan Kowalski and Frank Kowalski - *Colorado School of Mines*

Wouldn't teaching be easier if you could glimpse into your students' minds during the learning process? Evidence supports the use of formative assessment for this, but it is often challenging to implement in the higher education environment. We'll look at a variety of ways to probe student understanding, evaluate some of their strengths and shortcomings, and hopefully augment your personal teaching toolbox. In this session, you will also experience (as a student) free, browser-based software that facilitates the collection and archiving of real-time responses to open-format questions. Please bring your own pen-enabled mobile device (iPad, Tablet, Androids 4.0+) if possible.

Assessing Student Engagement Utilizing Team-Based Learning (TBL) and Reflective Blogging Practices

Shawna Lafreniere - *Azusa Pacific University*

As an appealing pedagogical tool, Team-Based Learning (TBL) has the potential to revolutionize the impact of student engagement through the use of group learning experiences in the classroom. In this session, participants will be exposed to the real-life practice of a professor and student learning assessment advocate who utilized TBL pedagogy, pre-class preparation, and post-class contemplation with reflective assessment through student blogging in a course. When compared to a lecture-based approach to teaching, students self-reported and demonstrated increased learning gains with a TBL, pre-class/post-class reflective blogging approach. Practical tips, student feedback, and evidence-based results of this approach will be shared.

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Engaging Students In A High-Impact, Learner-Centered Environment

Barbara Limbach and Wendy Waugh - *Chadron State College*

The higher education community demands that educators seek out and utilize new methods to enhance student learning. This session will present a five-step pedagogical process, built upon existing theory and best practice, which will provide participants with a useful means in which to move their courses, in any discipline, toward one that inspires students and encourages the development of critical thinking skills with emphasis on high-impact activities. Participants can expect to gain a new strategy/process they can adapt and use immediately to engage students and improve critical thinking in their courses whether face-to-face, online, or blended format.

Using Behavior-Based Fieldnotes for Consistent Assessment of Family Medicine Residents

Chantel Long - *Smoky Hill Family Medicine Residency Program*

The Next Accreditation System instituted by the ACGME includes semi-annual resident evaluations with feedback using Milestones: observable developmental benchmarks of skills, knowledge, and behaviors. Residency programs are to develop tools to assess Milestone achievement toward improving the resident evaluation process. Field Notes are forms to document feedback about directly observed resident physician behaviors. Field Notes were implemented in 9 Family Medicine residency training programs for 6 months. Variability among Milestones assessments decreased across all tested Milestones when Field Notes were used. Faculty found Field Notes helpful in evaluating residents according to Milestones. Residents found Field Notes effective for quality feedback.

Supportive Education for Returning Veterans (SERV): An Evidence-Based Curriculum

Michael Marks and Philip Callahan - *University of Arizona*

The graduation and retention rates among student veterans has become a political football, but in the midst of this controversy the Supportive Education for Returning Veterans (SERV) curriculum has been able to retain and graduate ninety percent of the student veterans that complete the courses. The curriculum model includes credit-bearing one-day to full semester courses that have been designed as a cohort-based, learner-centered, and problem-based learning model that promotes the development of a healthy support system as student veterans navigate their academic career.

Engaging Online Students: Promoting an Interactive Learning Experience

Vicki Martineau and Brian Gilliam - *National University*

Often, students complain that the online learning experience lacks the necessary interaction between instructor and students to ensure a supportive learning environment. Students feel disconnected and alone as they tackle assignments and attempt to learn the content. This presentation will demonstrate effective online teaching strategies that facilitate an engaging, interactive experience for students. Participants will observe a variety of technologies to enhance the learning experiences of online students, including synchronous video/audio chats and electronic feedback mechanisms. Participants who wish to replicate the in-person experience of onsite classes and engage their students will leave this presentation with a repertoire of strategies.

Teaching Observations and Faculty Development to Integrate Teaching Practice and Assessment of Student Learning Outcomes

Sharon McGuire and Vicki Steiha - *Boise State University*

This study explored the relationship between the implementation of evidence-based instructional practices (EBIPs) and student learning outcomes. Reformed Teaching Observation Protocol (RTOP) results, instructor interviews, and learning assessment data from over 50 STEM general education faculty members initially showed a disconnection between the integration of EBIPs, assessment, and outcomes. These results informed faculty development programming which successfully supported faculty to integrate their teaching practice, student learning outcomes and assessment. Participants will review study results, experience faculty development activities, including use of the RTOP and the creation of assessment activities, and consider how these approaches might be used at their home institutions.

The Ethics of OnLine Education: First Principles, Learning Objectives, and Methodology

Laura Miller-Purrenhage - *Kettering University*

Online classes have proliferated at a remarkable rate, partially due to such factors as market pressures and the desire to make learning more accessible. As a result, academia has not yet had time to agree on standards of best practice or pedagogy that best meets the needs of students or the objectives of universities. The result has been a vast variety in approach, methodology, and professor involvement in online courses, some of which have proved detrimental to student-learning. Through examining the responsibilities of administrators and professors and the methodology that best meets these responsibilities, this presentation will explore the ethics involved in creating online classes.

Most Likely Mistakes During the Assessment Process and Opportunities to Effectively Prevent

Farhang Mossavar-Rahmani and Cindy Larson - *National University and Argosy University*

In general, the goal of assessment of any program is to find out if the program is meeting the set forth objectives and, if it did not, what gaps may exist. By identifying the gaps, the institution can allocate proper resources to make programmatic improvements. In order to verify such gaps, in recent years, institutions of higher educations have developed a variety of techniques to more effectively assess programs. Most of these techniques are focusing on the alignment of outcomes, instructional strategies, and student performance. In this paper the authors will review and highlight the most common major mistakes that have occurred, or may happen, during the assessment process. Mistakes not addressed properly may cause the assessment to end up transforming into unintentional consequences of inaccurate assessment or fads. By fads, we refer to the ideas that are embraced enthusiastically for some time but will not improve the outcomes in any significant way.

Helping Students Find Success: Retention or Redirection?

Larry Napoleon Jr. and Jeanette Hoffman - *North Dakota State University*

Are you looking for ways to support those students who need just a little extra attention and guidance? We have developed a model of support that focuses on early distress identification and follow-up counseling to improve student retention and success. Along with the student, a formal body seeks to identify the causes for subpar performance and works with the student to establish a plan of corrective action. Participants will be introduced to our referral process and learn about our results. They will also learn effective ways of improving student performance and increasing retention and success.

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Infusing Active Learning and Research-Like Experience into the Sciences
Luiza Nogaj - *Mount St. Mary's College*

A conversion of a lecture-based course into an active learning environment in a studio classroom is described. Specific assignments and activities are provided as examples. The goal of these activities is to involve students in collaborative learning, teach them how to participate in the learning process, and give them a more active role in the classroom. In addition, a nine-week laboratory project that accompanies the activities is described. This laboratory sequence teaches students how to read primary literature, use common bioinformatics engines, clone a gene promoter from a human genome, and present the results in an oral and written format.

Understanding Growth Mindset and the Impact it has on Student Success
Katie Olivant - *California State University, Stanislaus*

According to Dweck (2006), people with a fixed mindset believe that intelligence and talent are fixed traits. They tend to avoid challenges, see effort as fruitless, give up easily, and ignore constructive criticism. Students and educators who have a growth mindset understand that intelligence and talent can be developed. They focus on improvement rather than allowing setbacks to defeat them. This perspective creates resilience that is essential for success. Dweck's research suggests that a growth mindset can be learned. This workshop will address the mindsets and explore ways to foster a growth mindset in both students and faculty.

Transitioning from Head to Heart: The Power of a Reflective Journal
Mark Orchard - *Brigham Young University, Idaho*

Deep learning is personal learning. It is the connection learners make when new information is captured cognitively in our head through study and personal preparation and then internalized in the heart through pondering and proving. A reflective journal is a powerful tool for transitioning new information from the head to the heart by proving a platform to capture personal insight and meaning. Once in heart, the student gains ownership in new information where they can begin to make deeper connections from previous learning. The heart therefore acts a repository waiting for the next wave of new insight for deeper learning.

Toward Dialogic Teaching: Using an Optimal Learning Model to Foster Deep Learning
Kimiko Ott - *University of Wisconsin, Stevens Point*

Do you wonder why even the most provocative questions posed to undergraduate students are often met with long periods of uncomfortable silence? Do you puzzle over why the voices of a few frequently dominate class discussions? These behaviors may be explained in part by understanding students' epistemological development. When conversations are placed within authentic contexts, however, and nested within an optimal learning model, it is possible to address these behaviors and improve the quality of learning. This session will help instructors transform flat classroom conversations into lively dialogue, collaborative inquiry, and deep learning. Participants will explore practical ideas for scaffolding inclusive conversations.

Developing a Global Learning Continuum
Carolyn Kelly Ottman - *Milwaukee School of Engineering University*

Global acumen is critical to success in a interconnected world economy. Yet, how do we prepare learners when family, work and other responsibilities create barriers to study abroad programs and prohibit them from these traditional transformative experiential learning opportunities. The focus of this presentation/discussion is on developing a continuum of learning strategies to prepare learners for a global world. Readings, personal

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interviews, sharing ethnic meals, short term travel and international service projects provide points on the continuum. Although multiple strategies will be presented, interaction with participants will promote further development, as well as critique of the continuum.

Service Learning as Contemplative Practice

Patricia Owen-Smith - *Oxford College of Emory University*

Contemplative practices are discussed as significant models of inquiry and "meaning making" in the service learning pedagogy. Zajonc (2010) defines contemplative methods as including a wide range of practices for two essential ends: the cultivation of attention and emotional balance and the development of faculties required for insight and creativity. This presentation will focus on the manner in which contemplative practices are used to deepen the service learning classroom and how these practices might influence and create social change and cultivate principled lives and an expanded social consciousness.

Johnny and Jenny Can Write: Strategies for Deepening Writing Skills

Robin Pappas and Jessica White - *Oregon State University*

Scholarship tells us that improving student writing requires opportunities to practice. As Peter Elbow (1997) and others have shown, "low-stakes writing" activities can facilitate skill development: after engaging in such activities, learners take bigger risks and can more easily figure out how to exercise their creativity and innovation on significant writing tasks. In this session, we will examine common expectations about student writing while engaging in low-stakes writing and discussion activities. Presenters will introduce strategies for building more writing into the classroom and share insights from research about how increasing opportunities to write benefits student learning.

Using Role Plays to Enhance Deep Learning and Cognitive Sophistication

Kristin Park - *Westminster College*

Perry, King and Kitchener and Roberts have argued that sophisticated cognitive development is demonstrated in the abilities to adopt alternate perspectives, recognize knowledge as contextual and fluid and practice deep learning. Role plays can be an effective pedagogy to achieve these goals. I describe a role-playing exercise in which students performed characters with different social locations, sources of authority and positions on the issue of female genital cutting (FGC). Through their own role play performance and experience of other characters, students navigated tensions between cultural relativism and universal human rights in complex ways. A pretest and direct and indirect assessment data measured students' increased appreciation of cultural differences, and success in considering various ways of knowing and forms of evidence, due to this exercise and larger course module.

Transforming Your Syllabus to Increase Student Engagement: Taking it from Instructor-Centered to Learner-Centered

Keisha Paxton and Emily Magruder - *California State University, Dominguez Hills*

Inherent in the process of syllabus construction is the perspective of the instructor. What if we build our syllabi from the perspective of the learner? A learner-centered syllabus has the potential to transform students' experiences of a course. This tool can become a dynamic instrument in making a course learner-centered rather than instructor-centered. Evidence supports that a learner-centered approach to course design is associated with greater student satisfaction, greater achievement (Johnson, 1991; Maxwell, 1998; Slavin, 1990),

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and greater student retention (Matlin, 2002; Sternberg & Grigorenko, 2002). In this session, we will apply learner-centered methods to syllabus design and presentation.

Excel Through SEL: Using Social and Emotional Learning (SEL) To Promote Civility in the Classroom

Mildred Pearson - *Eastern Illinois University*

Students today are coping with a variety of life changes. Have you ever wondered in what ways your student's social and emotional learning competencies impact their academic success or failure? How does SEL impact teaching and learning? Social and Emotional Learning (SEL) can promote civility and provide optimal learning environments, which leads to transformational change. In this session, participants will examine questions to promote students' personal and academic development. A review of social cognition and efficacy serves as a framework for SEL instruction and assist students in problem solving, critical thinking, creativity, and making responsible decisions; thus becoming productive citizens.

Examining Pedagogy in a Clinical Conditions Course: Strengthening Curricular Alignment and Interprofessional Education

Jennifer Pitonyak - *University of Washington*

This presentation shares results from a curricular project examining the pedagogical approach used in an interprofessional clinical conditions course. Course revision is strengthened when a structured process of program evaluation is used to examine how the delivered and experienced curriculum differs from the planned curriculum. Themes of student, faculty, and program perceptions of course instructional methods and course alignment with the planned curriculum of 3 rehabilitation medicine programs are presented.

A Teaching Practicum in an Occupational Therapy Curriculum: Addressing Faculty Shortages by Preparing Future Educators

Jennifer Pitonyak - *University of Washington*

This session describes an elective teaching practicum within an occupational therapy graduate program that was developed to introduce students to academic teaching and evolved to help address faculty shortages within the program. Themes that emerged from student self-assessment of learning as aligned with course learning objectives will be shared. Session participants will collaborate to identify 2-3 opportunities to integrate learning activities that introduce students to academic teaching into existing or new courses and create a learning activity with the objective of preparing future faculty in the health sciences or other disciplines.

Supporting Educator Use of Quality Websites with Professional Development

Cammy Purper - *California Baptist University*

Research has long identified a research to practice gap in education, but many challenges exist for bridging this gap with classroom educators, both new and experienced. This poster illustrates results of a study that examined the impact of a professional development intervention used with a group of early childhood educators to promote the use of online resources for bridging the research to practice gap.

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Course Design and Assessment of Civic Engagement Initiatives in the Classroom

A. Danielle Ramirez - *Woodbury University*

Encouraging social responsibility and developing student civic mindedness is vital to student development and it has become increasingly more important to design assignments that are able to engage students mentally while also allowing for them to demonstrate practical application of course concepts. This presentation explores ideas for how to design syllabi that (1) focus on a hybrid of traditional and innovative assignment development and assessment (i.e., exams and portfolio design); (2) how to successfully incorporate community partnerships into your course in a way that is relevant to your specific discipline and (3) tips for assessment/ grading of non-traditional student assignments.

Utilizing Kuhlthau's "Information Search Process" Model to Inform and Intervene in Student Projects.

Dawn Reece - *Central College*

The session will start with an explanation of the model by Kuhlthau in her attempt to explain the processes students experience during an inquiry project. I will especially focus on the feelings (affective) aspect of the model. Next, I will explain how I utilized the model in a class that included a semester-long inquiry project. I will share student journal excerpts and statistical means of the students' feelings over the semester. I will encourage those gathered to discuss if and when they assess students' feelings about their projects and the benefits/drawbacks of these assessments.

Formative Dialogues on Teaching: Non-Threatening Peer Coaching

Gail Rice - *Loma Linda University*

Formative Dialogues on Teaching is a program which encourages faculty-to-faculty observation of and conversation about teaching. The list of certified faculty "Colleagues" is published as "someone to talk to" about teaching. Faculty members who wish a dialogue will contact a Colleague and have them observe their teaching and then discuss their observations. Rather than being summative, this confidential process provides teachers with opportunities to engage in formative peer coaching for improved teaching and learning.

How to Stop Learning (and Start Again): Sets and Closures

Gail Rice - *Loma Linda University*

The poster focuses on the importance of beginnings and endings. Research from educational psychology and cognitive science helps to determine how learning should begin and end. Good learning includes more than simply receiving new content. Good learning is not a one-shot affair. Rather, it cycles through several phases. It starts and stops in prescribed ways. This book will help teachers to ascertain criteria for appropriate ways to begin and end learning sessions and to develop set and closure plans that will fit their content areas and enhance student learning. It will suggest ways to begin and close many types of learning experiences.

Practical Pedagogical Strategies for Moving Students Beyond Ethnocentric Thinking

Larry Riggs and Sandra Hellyer-Riggs - *Butler University and Indiana University - Purdue University Indianapolis*

We describe and critique concrete pedagogical strategies that were used to encourage students to move beyond ethnocentric thinking and show how these strategies can be used across disciplines and assessed. One author taught a Global and Historical Studies course at a small, private university. The second author taught

a Psychology course at a large, public institution. Concrete examples show how students were encouraged to look critically at their opinions. Participants will learn which research we have found most helpful, specific ways to challenge ethnocentric and egocentric thinking, and evidence that can be used to assess relevant student learning.

Strategic Communication in Sexual Assault Prevention: Empathic Interventions for Change

Jose Rodriguez - *California State University, Long Beach*

College students who view or participate in proactive performances report that they can console sexual assault survivors by delivering comforting messages. Proactive interventions focusing on empathy and the enactment of comforting responses to sexual assault disclosures represent a critically important communicative and performance-based phenomenon worthy of further research and applied praxis in college settings. To advance the research agenda for this significant area of scholarly inquiry, this discussion employs the work of Emmanuel Levinas and argues that interpersonal encounters represent the fundamental ethical relationship because the self is called into question during encounters with the other. This embodied sense of ethical responsibility can take form in a variety of self-defining instantiations, particularly in contexts involving sexual assault prevention. The theoretical and practical implications of this analysis will be discussed, so that participants can empower students to be agents of change. This discussion will provide participants the opportunity to have a meaningful conversation about preventing sexual assault on their campuses.

Understanding Service Learning: Empirical Evidence from In-Class and Online Environments

Alexandru Roman - *California State University, San Bernardino*

Does service-learning truly lead to an enhanced learning experience for students? Do students at the completion of the course really feel closer to their communities and experience an increased sense of civic duty? Do students relate better to class material as a result of the service-learning? These are just a few of many important questions regarding service-learning that we have yet to satisfactorily address empirically. Drawing on original research, this presentation discusses and attempts to answer these and a number of other questions. In particular, it provides concrete guidance and practical understandings for educators who seek to incorporate service-learning designs into their pedagogical approaches.

Technology Teaching Teachers

Estrella Romero, Veasna Chiek, Amber Casolari, Jami Brown, and Jude Whitton - *Riverside City College*

The panel of faculty facilitating this session will present "lessons learned" from incorporating technology in their classrooms. They will discuss the fears and pitfalls of using technology in the classroom as well as demonstrate how they overcame these pitfalls to improve their classroom instruction and programs. Topics discussed will include lessons learned from an inaugural Distance Education Academy for faculty, how to increase "instructor presence" and add a human touch to hybrid/online classes, flipping a lesson/course, and success using engaging teaching apps. Participants will take away ideas and templates for flipping classes as well as how-to information for incorporating teaching apps.

What Happens After College? A Study of Lifelong Learning

Ann Roselle - *Phoenix College*

The mission of most higher education institutions is to instill lifelong learning competencies through curriculum and instruction. Colleges and universities share a goal of developing graduates who are self-directed and motivated learners long after they leave college. Yet, little is known about neither how graduates

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pursue lifelong learning nor how well higher education has prepared them to do so. Preliminary findings from a large-scale, national lifelong learning study with recent graduates will be presented. A Research Associate on this project discusses graduates' lifelong learning needs for work and in their personal life, along with their approaches to meeting these needs.

Tech Select Faculty: Improving Instruction Through Technology

Kristi Roth and Donna Zimmerman - *University of Wisconsin, Stevens Point*

Effective utilization of innovative technologies in the college classroom is dependent upon the training and support provided to faculty. This session will describe the UW Stevens Point faculty development programs to promote infusion of technology in the college classroom and community. The Tech Select Faculty and Teaching Partner programs provide a framework for sustained training in technology with complementary discussion and peer support in application of technology concepts to assist in meeting student learning outcomes. Discussion of how these programs are applied in a classroom as well as with community partners will be included.

Educating for Life: The Importance of Teacher Empathy in Student Success

Katherine Rowell - *Sinclair Community College*

This presentation will explore new and exciting research on the importance of teacher empathy in increasing student learning and success. This presentation will discuss how "emotion" is an important and significant skill in even the most "scientific" of college classrooms. Each participant will have an opportunity to discover their empathy index score. Participants will learn about research on compassion and empathy as well explore ways to be a more empathetic teacher in order to create a stronger sense of belonging and attachment in our classrooms.

Flipping Psychological Statistics: Lessons Learned

Michelle Samuel - *Mount St. Mary's College*

This study investigated student performance across three pedagogical techniques: traditional lecture, technologically enhanced lectures, and a flipped classroom model. To assess student performance a between subjects design was used over three semesters. Results showed there were no significant differences in how students performed in the class due to pedagogical technique: traditional lecture, technologically enhanced or flipped classroom model. Students who used online supplemental resources reported liking them and felt they contributed to their learning. While using technology in the classroom may not significantly improve learning, there may be other valid reasons for using it in the classroom.

Teaching Cultural Competence Through Critical Thinking and Social Justice Frameworks

Carolyn Sandoval - *Texas A&M University*

The need to prepare students to engage in our increasingly complex and diverse world has become a higher education imperative. Using critical thinking and social justice theoretical frameworks, this interactive session will provide participants with useful tools to stimulate critical thinking in the classroom and increase intercultural knowledge and competence. Participants will also have an opportunity to reflect on their own experiences and comfort levels in facilitating learning that promotes civil dialogue around diversity issues, as well as discuss strategies to create safe and inclusive learning spaces.

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Discovering the Impact of a Backchannel Chat within Courses in Multiple Disciplines

Tina Selvaggi, Dana D'Angelo, and Jennifer Wright - *West Chester University of Pennsylvania*

This session presents the results of an ongoing study analyzing the use of backchannel communication in undergraduate classes among three professors at two different institutions of higher education in various disciplines and their students. Presenters will share the types of topics, questions, responses, and interactions that took place with backchannel chats in several courses, paying particular attention to students' collaboration, creativity, critical thinking, and communication as the primary observable measures.

Concussions and Cognition: Moving Head Injury Awareness into the Classroom

Holly Schmies and Tim Wright- *University of Wisconsin, Stevens Point*

This session will move the topic of concussions out of the athletic arena and into academics. So much of the recent attention surrounding concussions has been placed on athletics and how to safely return a student-athlete back to play, but how do we successfully return a student to the classroom who has sustained a head injury? Through discussion and case studies, we will learn how concussions can affect cognition and develop a framework to work collaboratively to ensure student academic success.

Engaging the Voices of International Students

Mary Jo Shane and Loredana Carson - *California Lutheran University*

Research has found that students who participate in classroom discussions retain information better as well as learn more. Yet, faculty are frequently frustrated with their international students lack of active, vocal participation in classroom discussions. This session will examine what some of the barriers to participation are in terms of international students, as well as explore different methods and techniques to actively engage international students in classroom learning.

Zombie Blogs? Watchdog Wikis? Are you Flipping out?

Victoria Shropshire - *Elon University*

Digital tools like wikis, blogs, and screen-casting are powerful, accessible, and easier to integrate into any course. They appeal to diverse learning styles by presenting information in a variety of formats and capitalizing on individual creative talents, as well as group dynamics. This presentation demonstrates how these tools can be used to enhance any course, along with flipping strategies that allow instructors to devote more face-to-face class time on what matters most. The transformation in exploring and representing information dynamically and creatively is clear; students learn independently, write more confidently and responsibly about social issues, and communicate effectively about complex topics to various audiences.

What's the DEAL with Social Justice? Learning Through Engagement and Reflection

Brian Smentkowski - *Appalachian State University*

This poster provides an evidence-based approach to enhancing social justice learning across the curriculum. The research for this project stems from an investigation into the application of Ash and Clayton's DEAL model of critical reflection and Jose Bowens' "cognitive wrappers" in an upper division government and justice studies class dedicated to law and politics. Central to this analysis and shared in this poster are the methods the instructor developed to help students learn, document, share, and articulate their own learning about social justice and injustice. It shares key aspects of the syllabus, assignments, assessments, and active learning techniques used to motivate and empower students to create digital social justice narratives and critical reflection artifacts.

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A Primer for Creating an Online Teaching Community

Renee Smith-Maddox, June Wiley, and Stacy Kratz - *University of Southern California*

With the growth of online education comes a growing demand for faculty who can teach in a web-based environment (Durrington, Berryhill, and Swafford, 2006). Online education environments require faculty to learn innovative pedagogical strategies for teaching online (Evans 2009). To accomplish this, it is imperative that faculty receive the training, support, and development necessary to create an effective online learning experience for students (Lackey, 2011; Orr, Williams, & Pennington, 2009). This presentation contributes to the discourse on faculty development in an online education environment. It describes the pedagogical perspectives of three social work educators who teach online.

Teaching Our Students Mindfulness to Foster Attention and Awareness

Ursula Sorensen - *Utah Valley University*

Contemplative education has become an innovative concept in higher education. At the heart of this concept is mindfulness. A type of mindfulness practice is mindful walking. Mindful walking may help students develop attention and awareness. Additionally, self-efficacy messages may increase their motivation to participate while engaging in mindful walking. Session participants will be introduced to these concepts and then experience mindful walking with self-efficacy messages. Finally, session participants will formulate a plan to utilize this type of practice in their own classroom.

Deep Learning: Are We Asking Too Much?

Eric Sorenson and Caleb Spencer - *Azusa Pacific University*

During this interactive workshop, two faculty, one from a STEM field, the other from a traditional liberal arts/humanities discipline, will engage the participants in an analysis of the time demands of their students' classes and daily lives with the goal of producing strategic pedagogies where deep learning and engagement coexist with realistic and realizable learning outcomes.

An Integrated Approach to Reduce the Propensity and Practicality of Cheating on Asynchronous, Objective, Online Assessments

Daniel Sullivan - *University of Delaware*

Cheating has long-dogged evaluation. The expanding scale and scope of online education increasingly complicate circumstances. Safeguarding academic honesty, along with tangential implications to student engagement, productive evaluation, learning effectiveness, and workflow efficiency, fan escalating concern. We profile a systematic, tech-based, socially-directed pedagogy that diminishes cheating without reducing the effectiveness of evaluation or the learning experience. Survey data collected from approximately 300 undergraduate and graduate business over 10 classes delivered from January 2014 through January 2015 indicate that this administratively efficient, scale-insensitive pedagogy, by blending technology and social methods, effectively reduced the propensity and practicity of cheating.

Effective Online Community Building for Action

Sheila Steinberg, Jalin Brooks-Johnson, and Brandi Millis - *Brandman University*

The poster addresses the issue of creating community in the online learning environment. Interaction that occurs via the online environment creates both challenges and opportunities for ways of engaging with students and fellow faculty due to the lack of face-to-face engagement. In this poster, we explore how to best

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engage to elicit a sense of commitment and community in the online learning environment. These strategies can also be applied to creating community amongst faculty and between faculty ands students. Once a core "sense of community" is established it will emanate out to the rest of the class. Establishing community means focusing on persistent and place-based discussions early on in the initial communication process. The goals is to establish patterns of interaction that are specific enough to the individual but are simultaneously relevant to the larger group. Being specific to the individual involves understanding and identifying information that is relevant to individuals and then incorporating this knowledge back into future interaction with the individuals and the larger group. Community is created through focusing on the various types of place-based and culturally attuned communication and interaction. Once the connections are established, they can be harnessed for greater action and engagement in the class and in the faculty group setting. This occurs because people become to feel part of a larger "community," something synergistically bigger than themselves but that still has unique, personal relevance.

Effective and Efficient Engagement Best Practices for Online Teaching and Learning

Sheila Steinberg and Jalin Brooks-Johnson - *Brandman University*

This hands-on session invites participants to create online class activities and strategies through the sharing of best practices of engaged online instructors. This session will include participants developing clear class expectations and strategies for a supportive online class community utilizing synchronous and asynchronous activities and virtual group. Participants will work together to create engaging online class activities and effective discussion board prompts. Participants will use the strategies presented in the session to efficiently and effectively provide meaningful feedback on fictitious class assignments and class discussions, including examples of some that require intervention due to tone and content.

Flippin' General Chemistry: Learner Analytics and Other Pedagogical Spices

Wayne Tikkanen - *California State University, Los Angeles*

Large lecture classes in the first term of general chemistry are challenging as they pose an academic challenge in content and also establishing good study habits and dispositions. Presented here are the results of flipping large general chemistry lectures, with the addition of just in time teaching (JITT) methods and metacognitive approaches. The use of detailed learning management system logs was used to determine what resources correlated with student success as measured by total points accumulated. "Take-aways" include better appreciation of LMS log data, use of JITT in a flipped class, and the impact of students' learning awareness on performance.

Take Students on a Virtual Archival Tour and Unleash their Imaginations

Maura Valentino - *Oregon State University*

Teach history with a virtual trip to the archives. Just as a small class might visit a local archive, you or your students can create a virtual archive of primary source materials from collections around the world thus enabling all of your students to benefit from a trip to the archives even if the class meets online. In addition, many primary source materials have been digitized and a digital copy is available and free to access, use or even modify. Learn to incorporate digital archival primary resources into coursework using the same pedagogy as primary resources from physical archives.

Making Learning Visible with Reflection and ePortfolios

Kristi Verbeke and Heidi Robinson - *Wake Forest University*

Whether within an individual course, or across a series of courses, an ePortfolio can be a powerful tool for making student learning visible and engaging students at a deeper level with that learning. We will discuss how to identify and structure course ePortfolio projects around student reflection and learning and show examples of student ePortfolios generated across our own series of courses. In addition to providing advice on how to best implement ePortfolios in your courses, we will conduct an exercise designed to help you begin to structure your own ePortfolio project.

Source Code: Assessing Cited References to Measure Student Information Literacy Skills

Dale Vidmar - *Southern Oregon University*

Sustainable assessment of student learning must focus on institutional outcomes that can serve to improve teaching and student learning. The cited works students choose to support their research may hold the key to assessing information literacy skills in a meaningful, relevant, and doable manner. In this workshop, participants will review sources listed in bibliographies drawn from student work samples to determine their ability to find, retrieve, and use quality information sources to support their research. The process concentrates on the first page and bibliography of writing samples using a customized rubric designed to assess specific proficiencies.

Addressing the Realities of Work-Life Imbalance: Striving for Successful Work-Life Integration in Academia

Sara Villanueva and Delia Kothmann Paskos - *St. Edward's University*

Some academics feel caught in an impossible dilemma that leads them to having only two choices: to have a fulfilling life outside of work (i.e. significant relationships, children) or to have an academic career, but not both. However, there are many examples of successful work-life integration models. This presentation will focus on several issues. First, a review of the most current literature on work-life balance, encouraging careful consideration of this issue in academia. Second, a discussion of the challenges associated with negative career outcomes. Finally, shared best practices, followed by an informative discussion on how to attain successful work-life integration.

Motivating the Reluctant Reader

Sara Walton and Gina Desai - *Glendale Community College*

Do you struggle to get students to do your assigned reading? Do you wish students got more out of the reading for your course? In this workshop, participants will learn three reading assessment activities that help students go through the active reading process and are based principles of motivation. Participants will learn how to do each activity and will have time to discuss how to modify and implement the assignments and/or motivation principles into their disciplines. All the principles and activities in the workshop are adaptable to any course that assigns reading.

Listening to Our Students: What We Have Learned from Small-Group Instructional Diagnoses

Gregg Wentzell[1], Jennifer Blue[1], and Matthew Evins[2] - *[1]Miami University and [2]Mevins Consulting*

Small Group Instructional Diagnoses (SGIDs), voluntary, informal, mid-semester student focus groups, have been conducted for many years at Miami University. After facilitating many SGIDs, we thought it would be

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useful for university instructors if we studied our results, drew some conclusions, and presented them. In this session, we will present our findings and engage in a conversation about what we can learn from them in order to improve teaching and learning in our classrooms.

An Experiment in Images: Using Comics to Teach Research Writing

Emily Wierszewski - *Seton Hill University*

When college students work with academic sources in essays and research projects, they often struggle with integrating multiple sources. They may isolate sources from one another instead of engaging those sources in a conversation, and they frequently leave their own perspectives out. The production of research comics can simplify the process of synthesis for students who are new to or troubled by academic research. In this practice-oriented session, classroom activities and sample comics will be shared, as will findings from classroom-based research that reveals students tend to struggle most with integrating their own perspectives as "active knowers" in research writing.

Educational Leadership: Challenge and Change in Campus Initiatives

Alan Wright - *University of Windsor*

This session explores the challenges and the benefits of commitment to campus educational leadership projects and initiatives. Participants will be invited to ponder models of embedded or distributed leadership at their home institutions and beyond. A recent leadership forum, which was part of a larger research study, asked professors to identify obstacles to leading change, and to rate the obstacles from minor irritant ('gnat') to major issue ('killer bee'). Participants will be challenged to come up with approaches to overcome these obstacles and to seek support in their campus environments. The presenter will also introduce approaches described in a recent research report he co-authored.

Faculty Perspectives on Academic Dishonesty: How and Why Cheating Happens

Tim Wright and Holly Schmies - *University of Wisconsin, Stevens Point*

This session will explore the concept of academic dishonesty. Qualitative data that was collected from faculty at a mid-size Midwestern university will be presented and attendees will have the opportunity to share their experiences, thoughts, and feelings regarding the topic. Active learning strategies will be used to further examine the topic and to develop an action plan for preventing academic dishonesty.

Distance Learning in an Undergraduate Exercise Psychology Course

Huaibo Xin, Monica Kempland, Faustina Blankson, and David Cluphf - *Southern Illinois University, Edwardsville*

The study aims to examine the effectiveness of web-facilitated, hybrid, and online learning modalities among undergraduate students in a public institution and to determine the adaptability and replicability of these three learning modalities. A total of 103 undergraduate exercise science majors participated in a quasi-experimental study. Students' learning outcomes were measured by mid-term exams, final exams, online journal entries, final course grades, and other in-class and online assignments, and compared among the web-facilitated, hybrid, and online course sections. Web-facilitated learning proved more desirable among undergraduate students than the other two modalities; hybrid learning, however, can serve as a viable alternative.

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Building an iPad Application to Facilitate Small Group Learning

Jasmine Yumori - *Western University of Health Sciences*

Delivering course materials while embedding questions, photographs, online resources, and discussion prompts in an organized fashion is difficult for an individual faculty member to handle in a lecture hall. An iPad application was created to deliver course materials for a case-based learning course. Conference participants will have the opportunity to operate this iPad application, review a survey designed to assess student perceptions of the application, and participate in a brain-storming and discussion session regarding further development and collaborative opportunities.

Building and Sustaining Centers that Support Faculty Work: From CTLs to Educational Development Centers

Todd Zakrajsek - *University of North Carolina, Chapel Hill*

This session is designed to both have a conversation about effective centers designed to support the work of faculty and to point to some existing resources in this area. Over the past 20 years, I have founded two centers and had a primary role in reconfiguring a third center. At present, I am working in a medical school and have found physicians to be fabulous to work with, but have had to develop a very different approach to delivering resources and consultations. Whether you have an established center on your campus or are thinking about starting one, please come to this session as we learn from one another.

Plenary Presentation: How Teaching Is Changing and Where We Are (or may be) Headed

Todd Zakrajsek - *University of North Carolina, Chapel Hill*

Society looks radically different than it did just 50 - 75 years ago. Teaching, however, although different in many ways from two generations ago, is certainly lagging behind other advances. A virtual conference is very different than the types of educational experiences faculty members faced just a few years ago, but what has really changed overall with respect to student learning? New educational buildings on college campuses still include fixed-seat auditorium style classrooms, faculty members continue to lecture, and students expect to have facts handed to them ready to be memorized. In this session we will play around a bit with what is changing in the area of teaching, and how moving from "teaching" to "learning" is finally making a significant impact on education. Where we are headed next is anyone's guess...but it is going to be exciting!

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