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"Teaching is also a dynamic endeavor involving all the analogies, metaphors, and images that build bridges between the teacher's understanding and the student's learning"

~ Ernest L. Boyer, *Scholarship Reconsidered*

InSight's cover photo "Path" provided by: **Naomi West**.

Naomi West resides in Jacksonville, Florida with her amazing husband and beautiful daughter. Although her family is her first love, their extensive travel over the years has brought about her passion and love for photography. She enjoys capturing the joy and expressions on the faces of people with her lens, as well as the beauty of architectural design and nature. She has shared her love of photography with others by capturing the special moments of their lives and families. In addition to her hobby, Naomi works full-time as a buyer for an aircraft company along with pursuing her degree at Park University. She will graduate in the Spring of 2016 with a BS in Human Resources in order to pursue her goal of acting as an advocate for other people in the business world.

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"When we make students struggle with their writing, we are making them struggle with thought itself"

~John C. Bean, *Engaging Ideas*

INTRODUCTION

About Park University...

Park University (originally Park College) was co-founded by Colonel George S. Park and Dr. John A. McAfee in 1875. An independent, private institution, accredited by the Higher Learning Commission of the North Central Association, Park University currently enjoys a distinguished position in higher education as a growing institution with 39 campus centers in 21 states including an extensive Online degree program. In 2005, Park University created The Center for Excellence in Teaching and Learning to promote the practice and profession of teaching, including scholarly inquiry into teaching across the disciplines. *InSight: A Journal of Scholarly Teaching*, an outreach of the Center's programming, is a refereed academic journal published annually. The editorial staff invites submissions of research and scholarship that support faculty in improving teaching and learning. Open to submissions from all disciplines and institution types, *InSight* articles showcases diverse methods for scholarly inquiry and reflection on classroom teaching.

From the Editor...

In my inaugural year as Editor, Park University is marking its 140th anniversary and *InSight* is publishing its 10th volume. With so much to celebrate, we are excited to offer you a special expanded collection of articles focusing on the scholarship of teaching and learning.

Professor Gary A. Smith, from the University of New Mexico, opens the volume with his editorial titled, "Why College Faculty Need to Know the Research about Learning." Smith's essay resonated with me, because I have failed many times in attempting to replicate innovative strategies I learned from colleagues. While many of us are actively engaged in revising our courses and methods to increase students' success, we need to be reminded sometimes that our enthusiasm is not always enough. We need to more thoroughly examine why certain practices work and others do not; as Smith argues, scholarly teachers need both explicit and tacit knowledge to successfully implement new strategies.

The three articles following Smith's editorial continue the theme of how we might become better educators by considering ways to collect and adapt digital resources, by training and transforming new teachers, and by increasing the institutional and personal support provided to faculty. The subsequent four essays explore how faculty and administration can help students to succeed, particularly unique populations such as military veterans and less motivated students. The final three essays examine the challenges and benefits of technology and online learning. While this collection of articles represents diverse perspectives and issues, they all have an important factor in common: despite the various obstacles that those of us in higher education face, these authors continue to strive for something more, something better. We might fail sometimes, but we carry on in the belief that our students matter and what we do is important.

I am grateful to B. Jean Mandernach, Executive Editor; Gail Hennessy, Director of CETL; and Lolly Okerstrom, former Managing Editor, for their guidance as I embarked on this new adventure. Keith Snyder and Patricia Marsh also deserve thanks for their diligent work as copy editors. Most importantly, my sincere thanks to Jamie Els, Editorial Assistant extraordinaire.

--Stacey Kikendall, PhD

"As scholars, we take on the obligation to add to the core of understanding, skepticism, method and critique that defines our fields and their ever-changing borders. We also assume the responsibility for passing on what we learn to discern and act, through teaching, social action, and through exchanging our insights with fellow professionals"

~ Lee S. Shulman, "From Minsk to Pinsk: Why a scholarship of teaching and learning?"

Why College Faculty Need to Know the Research about Learning

Gary A. Smith, PhD
Director, Office for Medical Educator Development
Professor, Organization, Information, and Learning Sciences
University of New Mexico

When the Recipe Fails

Imagine trying a new cookie recipe. You obtained the ingredients and instructions from a trusted friend who received glowing accolades when serving this dessert. Looking forward to the same success you bake a batch with very different results. The cookies are oddly shaped, somewhat burnt, and have a nasty taste – an inedible outcome. Discouraged, you throw away both the cookies and the recipe, destined to maintain your comfortable, if somewhat bland, baking repertoire.

How does this vignette of baking disaster relate to teaching? Consider for a moment those higher-education faculty who are encouraged to adopt interactive, learner-centered pedagogies in place of their existing didactic, teacher-centered practice that feels comfortable and yields consistent results. They learn of successes with interactive learning from others at their institution, through workshops, or from the scholarship of teaching and learning (SoTL) literature. Nonetheless, these faculty undertake great effort to change their instructional approaches only to be met with failure. Not only are they discouraged from further attempts to transform teaching and learning but colleagues who are skeptical of progressive teaching approaches gladly point to these results as contrary evidence to ambiguate arguments to change centuries-old traditions in teaching.

What if, instead, you were more knowledgeable about baking; not an expert chef but with an interest to understand the tenets of cooking that build self-efficacy to explore the challenge of an unfamiliar recipe? Looking back at the failed cookies you might diagnose a number of choices and errors that could, singularly or in combination, account for the unpalatable outcome. Was a necessary high-altitude correction neglected? Was it inappropriate to substitute margarine for butter? Did the short cut of setting the oven to a higher temperature contribute to the undesired results? Did you overbeat the dough?

In a decade of observing classroom instruction as both a faculty developer and a researcher, I have encountered many teachers who match with the first vignette but far fewer who resemble the baker in the second scenario. When adapting a teaching innovation, even in consultation with expert instructors, many teachers lack the knowledge to evaluate and understand the background to the recipe. The context of teaching – subject matter, student preparation and prior knowledge, physical classroom environment – may require modification to the teaching recipe just as the cookie dough required a different ratio of ingredients for a high-altitude kitchen. Care must be taken, however, not to make modifications that diminish the learning impact. Most commonly, these deleterious changes include substitutions and short cuts – comparable to margarine and a higher oven setting – that are contrary to the cognitive processes intended by the pedagogy. In addition, the implementation of a teaching innovation usually involves more than the explicit knowledge of written instructions but also involves tacit knowledge, which requires observation; analogous to the vague instruction of knowing when the dough is sufficiently blended. It is

It is unreasonable to expect all college professors to have learning-science expertise but what must they know about evidence-based and research-informed teaching and learning in order to successfully implement unfamiliar pedagogy?

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Best Intentions – Not the Best Results

Higher-education writers commonly lament why it is possible that lecturing remains the dominant approach to teaching many subjects despite a rich research literature on the positive learning impacts that result from instead emphasizing active and socially interactive learning opportunities. The paradox is particularly true in science, technology, engineering, and mathematics (STEM) fields where a loss of majors impacts both degree completion and the widely perceived strategic need to develop a larger and more diverse STEM workforce (e.g., Carnevale, Smith, & Melton , 2012; President's Council of Advisors on Science and Technology, 2012). Ironically, it is in these same STEM disciplines where most of the relevant research on pedagogies that affect learning has been conducted (see Kober, 2015, for a recent review), with funding from the National Science Foundation, National Institutes of Health, Howard Hughes Medical Foundation, and other public and private sources. The recent meta-analysis by Freeman et al. (2014) offers such a compelling view of the merits of replacing lecture with active learning in STEM courses that they draw a metaphorical comparison to pharmaceutical trials:

> If the experiments analyzed here had been conducted as randomized controlled trials of medical interventions, they may have been stopped for benefit—meaning that enrolling patients in the control condition [lecture] might be discontinued because the treatment being tested [active learning] was clearly more beneficial. (p. 8413)

Innumerable authors explore the barriers to change in higher-education teaching (e.g., Austin, 2011; Henderson & Dancy, 2007; Hora, 2012; McCrickerd, 2012; Sunal et al., 2001). Clearly, the matter of obstacles to adopting demonstrably effective teaching practices is a complex, multivariable problem with both individual and organizational components. It is not my intention to review or dispute these myriad interwoven webs that challenge progress on the wider sustained practice of research-based teaching methods. Instead, I focus on the teacher who wants to try something different, is at least partially if not wholly accepting of the relevant research, seeks out information and guidance, but does not succeed; see Henderson (2005) for an illuminating case study. It is these faculty, analogous to the first cookie baker, who could benefit most from colleagues in faculty development and SoTL because most or all other barriers to adoption have likely been surmounted.

Before exploring the cause of such failures it is important to acknowledge that higher-education faculty express strong interest in teaching and are knowledgeable, to some degree, about effective teaching strategies. The biennial faculty survey by the Higher Education Research Institute (HERI) consistently shows that 95-99% of faculty across the various institutional types identify teaching as a personally essential or very important component of their job; a rating that is significantly higher than for research or service (Eagan et al., 2014). If Henderson and Dancy's (2007) qualitative study of a sample of physics faculty is representative, then we can assume that college instructors hold views of the ineffectiveness of lecture in comparison to interactive pedagogies that are consistent with education research, albeit inconsistent with their actual practice. The HERI surveys over the past 25 years (available at http://www.heri.ucla.edu/facPublications.php) have shown an overall downward trend in the use of extensive lecturing in most classes (hovering just below 50% in the most recent surveys) while use of small-group learning during class and group projects have both more than doubled and exceed use of lecture. In addition, the

prospects for continued changes are likely as younger faculty are promoted through the ranks in the wake of retirements; assistant professors consistently show less use of lecture (47.7 % in the 2013-14 survey) and greater use of small-group learning (68.1 %) than do full professors (55.3% and 50.9%, respectively).

The challenge of implementing research into practice is not unique to higher education but is also problematic in many aspects of health and human services, inspiring the scholarly field of implementation science (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). Two of the many lessons learned from implementation science (Fixsen et al., 2005) are critically important to faculty developers and SoTL researchers. First, the dissemination of research results through peer-reviewed publications, mailings, and distribution of practice guidelines is, by itself, ineffective to induce change. The second key finding from implementation science is that training, no matter how well it is done, will not, by itself, lead to effective deployment of research-based innovations and interventions; i.e., the traditional faculty development workshop, alone, will not likely transform teaching to a great extent. Elaine Seymour (2002), a scholar of higher-education STEM reform, captures the essence of these findings by pointing out that there is no clear evidence that "good ideas, supported by convincing evidence of efficacy, will spread 'naturally'—that, on learning about the success of particular initiatives, others will become convinced enough to try them" (p. 92).

With these insights, let's now return to our critical question: What causes failure even when implementation of research-based instruction is accepted and attempted? Evidence for the *lack* of increased student learning through some utilization of active learning is more apparent in the literature than the proponents of such innovation commonly profess. In Richard Hake's (1998b) early and widely cited review comparing conceptual learning of introductory physics via interactive engagement versus lecture, it is apparent that the interactive pedagogy is capable of generating at least twice the learning of lecturing, but there are a handful of classes where the results are indistinguishable. Even in the bravado of the Freeman et al. (2014) analysis, concluding that, on average, failure rates in introductory STEM courses increase by more than 50% under traditional lecture conditions than under active learning, it is also notable that in a quarter of the studies failure rates differed by no more than 5 percentage points or were actually higher in the active-learning courses. Why aren't all faculty, and more importantly their students, experiencing the benefits of active learning?

There is a great deal of teaching that involves tacit knowledge including on-the-fly adjustments that come from experience.

The Tacit Knowledge Problem

I suggest that one critical implementation problem is the transfer of knowledge from the research arena to the classroom and from one innovative teacher's practice to another teacher. Central to this issue is the organizational-learning research by Ikujiro Nonaka, which distinguishes between explicit and tacit knowledge (e.g., Nonaka & vonGrogh, 2009). Explicit knowledge is that familiar form of knowledge that we transfer to others through spoken and written word and illustrations. Tacit knowledge, on the other hand, cannot be articulated and is tied to sensed experiences, intuition, and implicit rules of thumb. If you pause to reflect for a moment, you will likely realize that much of what you do in your teaching cannot readily be described to a colleague; you might, instead, say "come to my class to see it and then I think you'll understand." There is a great deal of teaching that involves tacit knowledge including on-the-fly adjustments that come from experience.

Nonetheless, the dissemination models for implementing evidence-based instruction assume that the research-paper protocol, the best-practices guideline document, or the workshop, all of which transfer explicit knowledge, will suffice for implementing effective practice. This approach has included a plethora of websites

and so-called handbooks for college teachers (Angelo & Cross, 1993; Barkley, 2009; Barkley, Cross, & Major, 2014) that list dozens of instructional options in a format that is reminiscent of the cookie recipe contemplated at the beginning of this essay. But, how much tacit knowledge – analogous to properly stirring the cookie dough – is actually required in order to obtain the desired results?

I suggest, as well, that without tacit knowledge of teaching methods there is an increased likelihood of making substitutions or taking short cuts that limit, or perhaps even negate, the effectiveness of the intervention; analogous to using margarine instead of butter and speeding up the cooking time at a higher baking temperature. Without the subjective, experiential tacit knowledge of enacting an innovation, prior experiences and objectives may lead to ineffective implementation despite the explicit knowledge of the intervention. For instance, in his metadata report on the impact of interactive engagement versus lecture in physics, Hake (1998a) concluded that limited skills of the teacher to promote effective interactivity among students (arguably acquired as tacit knowledge from experience or observation) accounted for the few unsatisfactory results using active learning even when the instructor had explicit knowledge of the pedagogical methods and materials.

Turpen and Finkelstein's (2009) observational study of different physics professors using a well described active-learning strategy in large-enrollment classes – peer instruction with audience response systems, aka "clickers" (Mazur, 1997) – is an informative example of how varying tacit knowledge leads to variable implementation of a pedagogical innovation. Despite the simplicity of the method as an explicitly described procedure, Turpen and Finkelstein (2009) found that each professor implemented the method in a different way with recognizable disparate learning opportunities for students. The authors attributed these different instructional implementations "to how instructors use their knowledge of educational innovations and situational constraints to arrive at practical decisions in the moment-to-moment demands of the classroom" (p.14); clearly representing the intersection of tacit knowledge with the explicitly conveyed knowledge of the method. Notably, not all of the resulting variations from the "normal" implementation of peer instruction were viewed as negative by Turpen and Finkelstein (2009) who noted that their classroom observations opened windows on new research questions.

Differential tacit knowledge for implementing an explicitly described innovation may be a significant factor in the highly varied results for such innovations in the literature and may also influence the persistence of a new user. If the "recipe" for implementing a pedagogical innovation is dependent on the tacit knowledge of an "expert cook" (aka, experienced innovating teacher, SoTL researcher) then the willing, but under-knowledged teacher, and his or her students, may wind up with frustration that leads to abandoning an approach that has shown high value in a different context (e.g., with a different "cook" in a different "kitchen").

The Competent Diagnosis Problem

I propose that the second core implementation problem is illustrated by our two baking experiences. Specifically, the difference in our abilities to diagnose what might have gone wrong with the implementation of the cookie recipe. In the first situation, the baker was not only missing important tacit knowledge but gave up because of an inability to see what might be corrected in order to obtain a desired outcome. The baker in the second story, in contrast, recognized potential flaws in execution that impaired success but could be remedied. Short cutting and substitutions in the implementation of teaching innovations can have similar impacts and can only be avoided, or perhaps in some cases competently executed, if the teacher possesses sufficient foundational theoretical knowledge of learning processes. Educational researchers are more successful at increasing student

learning through innovation than are colleagues who receive the intervention by handoff from the expert (Pollack & Finkelstein, 2008). Therefore, Andrews, Leonard, Colgrove, and Kalinowski (2011) suggest that the effectiveness of active learning may be biased in the literature by the propensity of science-education researchers to publish their results. "We are concerned the impressive learning gains documented in the active-learning literature may not be typical of what typical instructors are likely to obtain" (p. 395).

In his detailed case study of a willing-to-change, but largely unsuccessful, faculty member, Charles Henderson (2005) provides a basis for the importance of competent diagnosis. The instructor drew most of his teaching innovations from external sources (along with his own ideas) but demonstrated only "awareness knowledge" of some of the selected techniques. By not endeavoring to obtain stronger explicit and tacit knowledge for these approaches, he not only missed opportunities but also modified some of the techniques without understanding why these innovations generated greater learning in their intended forms. Arguably, a significant part of this implementation problem was that the descriptions of the techniques were not grounded in explanations for why the techniques succeeded or what procedural components were essential and should not be modified or left out (Henderson, 2005). If the professor had greater knowledge of the theoretical underpinnings of the techniques, akin to our second baking experience, then he or she may have been able to determine the value of following the prescribed recipe or where a substitution or short cut would be acceptable or even represent a further beneficial extension of the method.

Perhaps one of the greatest problems with implementing interactive learning techniques is confident teacher understanding of group-learning dynamics. Proponents of small-group learning pointed out long ago (e.g., Johnson, Johnson & Holubec, 1984) that simply putting students into groups will not assure effective interactive learning. Nonetheless, in my faculty-development experience many instructors give little, if any, thought to evidence-based approaches for creating groups, assuring positive interdependency of group learning, individual accountability to a group, or the likely necessity of team-building activities. Henderson (2005) noted this deficiency of understanding as a critical problem for the physics professor described above. Lou, Abrami, and Spence (2000), in a meta-analysis of small-group learning in K-12 and higher-education settings, concluded that the most important factors determining student achievement from small-group learning are instructor knowledge of methods and design of problems, and how the groups are constructed, which points to the importance of teacher knowledge of methods that go beyond simple recipes.

The differential impact of instructor interaction with groups and how groups of students learn together appears dramatically in a recent study (Daubenmire et al., 2015) of two professors teaching chemistry with Process Oriented Guided Inquiry Learning (POGIL). Each instructor was experienced with POGIL and endorsed as a workshop facilitator for training others in this small-group learning approach. Nonetheless, students in one section scored nearly 30% higher on the conceptual knowledge component of a nationally validated examination. Data collected during the study showed the instructor of the higher-performing section commonly responded to student questions by probing with further questions, whereas the other instructor provided the requested answer. Quality of inquiry between students during group learning was also stronger for the higher-achieving class. Therefore, how one implements a method and how students are taught to engage with the method are critical determinants of learning outcomes.

Learning in groups depends as much on sociological phenomena as it does on cognitive processing. Groups go through developmental stages in order to function as an effective learning entity; which is a critical argument against a common practice to remake teams at least once during a course. In a particularly sobering study of group development in a classroom setting, Wheelan and Lisk (2000) tracked student teams that remained intact while completing a cohort-based curriculum that lasted more than one year. Five weeks into the curriculum nearly

all of the teams still depended on the instructor to drive their learning activities and even after a year only half of the teams were truly working and learning together as groups of equal, trusting colleagues. The lesson of this story may be that we should not expect teams to function well within a 15-week semester unless we make team-building a priority. Nonetheless, many faculty feel ill-equipped to facilitate such activities or find them to be a "waste of time" in fast-paced, content-heavy courses.

Lastly, in this contemplation of the diagnosis problem is consideration of the fact that not all active learning is created equal. To some faculty the active-learning umbrella implies that if they have students do anything other than listen to lecture that there will be better learning and higher grades. I have undertaken classroom observations where activity was apparently added for the sake of making students active without considering how the students' work would actually generate the desired learning outcomes. In fact, time spent on active learning in class by different teachers does not correlate to learning gains (Andrews et al., 2011). Micki Chi's (2009; Chi & Wylie, 2014) research that differentiates active learning based on overt learner behaviors, resulting in different levels of cognitive processing and different amounts of retained knowledge, is particularly informative. Using Chi's Interactive-Constructive-Active-Passive (ICAP) framework, it is possible for instructors to assess the likely match of teaching intentions with learning outcomes and to use student behaviors to see if the intentions were met.

What Does a Scholarly Teacher Need to Know?

Although few faculty choose to develop scholarship of teaching and learning into their portfolio, it is arguable (and in fact, expected at some institutions for tenure) that *all* faculty be scholarly teachers. Although not necessarily constructing structured research projects and disseminating results, as in the case of SoTL, scholarly teachers are reflective on their practice, observant for learning problems to explore, and cognizant of the research that is pertinent to resolving those problems and to fueling their reflection (Richlin, 2001). The scholarly teacher does not need to be the equivalent of an expert chef, but she or he should possess an informed and inquiring mind about teaching that permits problem diagnosis and solution analogous to our second baking experience.

Carl Bereiter (2014) proposes principled practical knowledge (PPK) as a means for closing the implementation gap between research and practice in education. In simplest terms, PPK combines the know-how of teaching with the know-why from research. Therefore, the procedural recipe for a teaching method is combined with sufficient theoretical background so that the user understands the principles underlying the technique. This theoretical foundation need not be extensive but focuses, instead, on the practical application of education research to teaching. By analogy, the cookie recipe provided explicit, practical knowledge but lacked context for why the recipe contained certain ingredients or procedures. This explanatory knowledge, which is critical for improving or simplifying the recipe or even to implementing it for best results, is usually dependent on the principled knowledge of the baker. PPK includes the explanatory power of theory but has practical implementation, rather than explanation, as its purpose.

> **To some faculty the active-learning umbrella implies that if they have students do anything other than listen to lecture that there will be better learning and higher grades.**

I suggest that PPK should be the basis for adoption of new pedagogies by scholarly teachers. In order to change teaching practice for consistency with research results explained by theory, the scholarly teacher needs to know why the innovations to their teaching are expected to work and not just how to do them. Diagnosing what went wrong when results fail to meet expectations, determining how to integrate different pedagogical strategies for maximum effect, and knowing

how to simplify or make further innovative modifications to a new instructional design requires PPK.

One limitation remains, however, because PPK is explicit knowledge (Bereiter, 2014) and leaves the tacit-knowledge gap unfilled. Nonaka and von Grogh (2009) acknowledge that social practice is a necessary condition for acquiring tacit knowledge and for potentially converting it into explicit knowledge over time.

...the scholarly teacher needs to know why the innovations to their teaching are expected to work and not just how to do them.

College teaching is usually viewed as an individual activity, taking place in the absence of colleagues. Classroom observation is typically viewed as a judgmental part of required performance evaluation. In contrast, the growth and exchange of tacit knowledge about teaching, and especially about the implementation of unfamiliar, novel approaches, requires socialization in the practice of teaching. Tacit knowledge of teaching methods, other than that gained from one's own experience, is acquired by watching others' practice, asking questions and offering suggestions. It requires observing classes not for the purpose of judging the teacher but to learn from the teacher. It requires communities of practice where faculty can directly share, create, and curate knowledge about teaching with one another.

How Can SoTL Help?

How does a college professor acquire the necessary principled practical knowledge to be a scholarly teacher? I argue that it is critical that instructional recipes for implementing evidence-based and research-informed pedagogies must come with the PPK attached for ready use. Faculty development workshops and consultations must include readily digestible explanations of why the methods work and what components are essential in order to expect success.

SoTL researchers can assist by being certain to both ground their research coherently in relevant theory and to translate the results into practical instructional application. Rooting educational research design and results in existing theory is not only an obviously essential research practice but it may also enhance adoption of new approaches. Persuading someone of a result, especially when they are skeptical of that result, is more likely when a cause for the outcome can be articulated rather than leaving the conclusion victim to claims of weakness due to anecdote or statistical relationships that are not explained by causality (Hoeken, 2001).

While grounding in theory and prior research it is also important that SoTL researchers move beyond their field. Considerable attention is given to discipline-based education research (e.g., Singer, Nielsen, & Schweingruber, 2012) and most SoTL scholars feel most confident with conducting their efforts within the comfort range of disciplinary content and epistemology. However, conducting SoTL work within disciplinary silos runs the risk of missing highly relevant learning-science contributions from other fields. For example, I recently surveyed ten articles on the use of audience response systems in medical education, published between 2003 and 2015. None of the articles acknowledge the research on peer instruction or use this method in the research design, despite the fact that peer instruction is the only clicker-mediated pedagogy that is backed up by extensive research (e.g., Crouch & Mazur, 2001; Mazur, 1997; Smith et al., 2009). The disparate results reported on learning achievement in the medical-education research may, therefore, paint an unnecessarily negative perception of teaching with clickers by not informing medical educators of an effective pedagogical approach and perhaps the easiest interactive learning approach to implement in large lecture settings.

In conclusion, all teachers must be scholarly teachers. They must acquire both principled practical knowledge and tacit knowledge if they are to successfully implement research-based teaching innovations in their courses. With so many potential barriers to reforming undergraduate instruction it is essential that faculty

willing to adjust their pedagogy not fail because they lacked essential knowledge to succeed. SoTL researchers can play a critical role by combining know-how and know-why knowledge that assures that the practicing teacher knows the essential components of the pedagogical intervention that cannot be removed or substituted without potential loss of learning fidelity. The know-why knowledge will be most persuasive if it is rooted in theory that explains the causes of learning and is broadly based across disciplinary contexts to assure generalizability beyond the single research case. Every teacher who is willing to try a new recipe should have the prospects of success and the ability to diagnose what went wrong during a failure with the potential to not only correct the error but to further innovate the method for even more positive results.

Acknowledgements

References

Andrews, T. M., Leonard, M. J., Colgrove, C. A., & Kalinowski, S. T. (2011). Active learning not associated with student learning in a random sample of college biology courses. *CBE Life Sciences Education*, *10*, 394–405. doi:10.1187/cbe.11-07-0061

Angelo, T. A., & Cross, K. P. (1993). *Classroom assessment techniques: A handbook for college teachers.* San Francisco, CA: Jossey-Bass.

Austin, A. E. (2011). *Promoting evidence-based change in undergraduate education*. Washington, DC: National Academy of Sciences. Retrieved from http://sites.nationalacademies.org/dbasse/bose/dbasse_071087

Barkley, E. F. (2009). *Student engagement techniques: A handbook for college faculty*. San Francisco, CA: Jossey-Bass.

Barkley, E. F., Cross, K. P., & Major, C. H. (2014). *Collaborative learning techniques: A handbook for college faculty* (2nd ed.). San Francisco, CA: Jossey-Bass.

Bereiter, C. (2014). Principled practical knowledge: Not a bridge but a ladder. *Journal of the Learning Sciences*, *23*(1), 4–17. doi:10.1080/10508406.2013.812533

Carnevale, A. P., Smith, N., & Melton, M. (2011). *STEM: Science, technology, engineering, mathematics*. Retrieved from Georgetown University, Center on Education and the Workforce website: https://cew.georgetown.edu/report/stem/

Chi, M. T. H. (2009). Active-constructive-interactive: A conceptual framework for differentiating learning activities. *Topics in Cognitive Science*, *1*(1), 73–105. doi:10.1111/j.1756-8765.2008.01005.x

Chi, M. T. H., & Wylie, R. (2014). The ICAP framework: Linking cognitive engagement to active learning outcomes. *Educational Psychologist*, *49*(4), 219–243. doi:10.1080/00461520.2014.965823

Crouch, C. H., & Mazur, E. (2001). Peer instruction: Ten years of experience and results. *American Journal of Physics*, *69*, 970-977. doi:10.1119/1.1374249

Daubenmire, P. L, Bunce, D. M., Draus, C., Frazier, M., Gessell, A., & Van Opstal, M. T. (2015). During POGIL implementation the professor still makes a difference. *Journal of College Science Teaching*, *44*(5), 72–81. Retrieved from http://www.nsta.org/college/

Eagan, M. K., Stolzenberg, E. B., Berdan Lorzano, J., Aragon, M. C., Suchard, M. R., & Hurtado, S. (2014). Undergraduate Teaching Faculty: The 2013-2014 HERI Faculty Survey Los Angeles, Higher Education Research Institute, UCLA.

Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M., & Wallace, F. (2005). *Implementation research: A synthesis of the literature*. Retrieved from National Implementation Research Network website:
http://nirn.fpg.unc.edu/resources/implementation-research-synthesis-literature

Freeman, S., Eddy, S. L., McDonough, M., Smith, M. K., Okoroafor, N., Jordt, H., & Wenderoth, M. P. (2014). Active learning increases student performance in science, engineering, and mathematics. *Proceedings of the National Academy of Sciences*, *111*, 8410–8415.
doi:10.1073/pnas.1319030111

Hake, R. R. (1998a). Interactive-engagement methods in introductory mechanics courses. Retrieved from http://www.physics.indiana.edu/~sdi/IEM-2b.pdf

Hake, R. R. (1998b). Interactive-engagement versus traditional methods: A six-thousand-student survey of mechanics test data for introductory physics courses. *American Journal of Physics*, *66*(1), 64–74. Retrieved from http://ajp.dickinson.edu/

Henderson, C. (2005). The challenges of instructional change under the best of circumstances: A case study of one college physics instructor. *American Journal of Physics*, *73*(8), 778-786. doi:10.1119/1.1927547

Henderson, C., & Dancy, M. H. (2007). Barriers to the use of research-based instructional strategies: The influence of both individual and situational characteristics. *Physical Review Special Topics - Physics Education Research*, *3*(020102),1-14.
doi:10.1103/PhysRevSTPER.3.020102

Henderson, C., & Dancy, M. H. (2008). Physics faculty and educational researchers: Divergent expectations as barriers to the diffusion of innovations. *American Journal of Physics*, *76*(1), 79-91. doi:10.1119/1.2800352

Hoeken, H. (2001). Anecdotal, statistical, and causal evidence: Their perceived and actual persuasiveness. *Argumentation*, *15*, 425–437. Retrieved from http://link.springer.com/journal/10503

Hora, M. T. (2012). Organizational factors and instructional decision-making: A cognitive perspective. *The Review of Higher Education*, *35*(2), 207–235. doi:10.1353/ rhe.2012.0001

Johnson, D. W., Johnson, R., & Holubec, E. (1984). *Cooperation in the classroom* (1st ed.). Edina, MN: Interaction Book Company.

Kober, N. (2015). *Reaching students: What research says about effective instruction in undergraduate science and engineering*. Retrieved from The National Academies Press website: http://www.nap.edu/catalog.php?record_id=18687

Lou, Y., Abrami, P. C., & Spence, C. (2000). Effects of within-class grouping on student achievement: An exploratory model. *Journal of Educational Research*, *84*(2), 101–112. doi: 10.1080/00220670009598748

Mazur, E. (1997). *Peer instruction: A user's manual*. Upper Saddle River, NJ: Prentice Hall.

McCrickerd, J. (2012). Understanding and reducing faculty reluctance to improve teaching. *College Teaching*, *60*(2), 56–64. doi:10.1080/87567555.2011.633287

Nonaka, I., & von Krogh, G. (2009). Perspective: Tacit knowledge and knowledge conversion: Controversy and advancement in organizational knowledge creation theory. *Organization Science*, *20*(3), 635–652. doi:10.1287/orsc.1080.0412

President's Council of Advisors on Science and Technology. (2012). *Engage to excel: Producing one million additional college graduates with degrees in science, technology, engineering, and mathematics*. Washington, DC: Executive Office of the President. Retrieved from http://files.eric.ed.gov/fulltext/ED54151 1.pdf

Pollock, S., & Finkelstein, N. (2008). Sustaining educational reforms in introductory physics. *Physical Review Special Topics - Physics Education Research*, *4*(1) (010110), 1-8. doi:10.1103/PhysRevSTPER.4.010110

Richlin, L. (2001). Scholarly teaching and the scholarship of teaching. *New Directions for Teaching and Learning*, *2001*(86), 57–68. doi:10.1002/tl.16

Seymour, E. (2002). Tracking the processes of change in US undergraduate education in science, mathematics, engineering, and technology. *Science Education*, 86, 79–105. doi: 10.1002/ sce.1044

Singer, S. R., Nielsen, N. R., & Schweingruber, H. A. (2012). *Discipline-based education research: Understanding and improving learning in undergraduate science and engineering*. Retrieved from The National Academies Press website: http://www.nap.edu/catalog.php?record _id=13362

Smith, M. K., Wood, W. B., Adams, C. K., Wieman, C. E., Knight, J. K., Guild, N., & Su, T. T. (2009). Why peer discussion improves student performance on in-class concept questions. *Science*, *323*(5910), 122–124. doi: 10.1126/science.1165919

Sunal, D. W., Hodges, J., Sunal, C., S., Whitaker, K. W., Freeman, L. M., Edwards, L., … Odell, M. (2001). Teaching science in higher education: Professional development and barriers to change. *School Science and Mathematics*, *101*(5), 246–257. doi: 10.1111/ j.1949-8594.2001.tb18027.x

Turpen, C., & Finkelstein, N. D. (2009). Not all interactive engagement is the same: Variations in physics professors' implementation of peer instruction. *Physical Review Special Topics - Physics Education Research*, *5*(020101),1-18. doi:10.1103/ PhysRevSTPER.5.020101

Wheelan, S. A., & Lisk, A. R. (2000). Cohort group effectiveness and the educational achievement of adult undergraduate students. *Small Group Research*, *31*(6), 724–738. doi:10.1177/104649640003100605

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The Five Cs of Digital Curation: Supporting Twenty-First-Century Teaching and Learning

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Digital curation is a process that allows university professors to adapt and adopt resources from multidisciplinary fields to meet the educational needs of twenty-first-century learners. Looking through the lens of new media literacy studies (Vasquez, Harste, & Albers, 2010) and new literacies studies (Gee, 2010), we propose that university professors be savvy consumers of multimedia through purposeful content curation. In this paper, we will discuss practices that university professors may use to transform teaching and learning through effective collection, categorization, critiquing, conceptualization, and circulation of resources deemed to have curricular and content standards value.

University professors spend a considerable amount of time identifying, locating, downloading, categorizing, manipulating, presenting, and assessing academic materials to collect and use with their students. This process is not new. Although these types of activities have occurred for years, technological advances have dramatically increased the ability of university professors to do all of these things in a much more efficient and effective manner. Although the level of efficiency has increased, so too has the range of digital materials available and the amount of information that needs to be considered. These new instructional assets are a result of evolving new technologies. To better maximize the potential of these digital materials, assets must be organized well. This creates a need for university professors, as Scime (2015) suggests, to "collect, preserve, attend to, and create themed content packages that together, offer a unique perspective" (Introduction section, para. 3).

This paper proposes that university professors have the opportunity to become, of necessity, savvy consumers of digital material and resources through purposeful content curation processes. Through the progression of effective collection, categorization, critiquing, conceptualization, and circulation of resources, university professors will be able to more effectively integrate the plethora of potential resources they encounter in today's ever changing digital landscape. As educators responsible for imparting twenty-first-century skills, we argue that it is essential for teacher educators to become digital curators by identifying and utilizing resources that are reflective, relevant, and representative of the goals and objectives contained within the curriculum.

What is Digital Curation?

Our contention is that university professors are confronted with an onslaught of digital materials and resources that have the potential to dramatically enhance teaching and learning practices if intentionally curated. To do this, digital materials need to be mindfully mined, organized, and archived appropriately. We refer to this process as *digital curation*.

For some, digital curation is a new idea, but in reality educators have long been curators. For example, archeologists have served in dual roles both as "scientists and cultural resource managers" (Christenson, 1979, p. 161). In the same way, university professors perform dual roles as content collectors of their discipline and transmitters of scholarly work to current and future generations. It is

important to recognize that "there have been people doing different aspects of data curation and digital preservation for decades" (Yakel, 2007, p. 335) and that the term digital curation "can be perceived differently by different individuals and disciplines" (Beagrie, 2008, p. 4). Therefore, we define digital curation as

> the creation, management, and use of digital materials...for a wide range of activities….The term digital curation is increasingly being used for the actions needed to add value to and maintain these digital assets over time for current and future generations of users. (Beagrie, 2008, p. 3)

The collection and assembling of instructional materials is not enough; a value judgment needs to be made as to the appropriateness of the material for the content being taught. Collections transform into curations once a value judgment about the appropriateness of the material being considered is made. Consideration needs to be given to the relevancy, accuracy, authenticity, and appropriateness of the materials in question.

A collection can be transformed into an appropriate instructional source through an intentional process that forms the basis of curation. The process of digital curation provides a means to support teaching through the careful management and assembly of digital resources; it is a way of collecting and creating a retrospective of what you are trying to attend to during the instructional process.

Why is Digital Curation Relevant Today?

There is an increased need for faculty to realize the impact that digital curation has on their content due to the speed at which data and information are being developed, acquired, and utilized. Traditionally, research and teaching agendas were curated primarily through the use of journals and presentations; however, with the advances in technology, enhanced tools allow researchers to preserve their work in new venues and formats to reach new audiences. These evolving capabilities afford increasingly sophisticated opportunities for interactive multidisciplinary scholarship that enrich educational practices. Yakel, Conway, Hedstrom, and Wallace (2011) argue that

> Digital information is all around us. More and more information is either born digital or digitally reformatted. A new generation of professionals is needed who are comfortable working in hybrid (digital and analog) environments and capable of managing media-neutral information throughout its life cycle. (p. 23)

Reform efforts in education have taken hold, and there exists a need for structures to be developed to document program effectiveness. Twenty-first-century educators must ensure that the content and sources they are using align with the expectations of their credentialing organization. Additionally, and most importantly, these resources have to be relevant to meet their students' needs. These efforts become **Curating digital resources allows university professors to connect and transcend academic content areas to broader issues...** supportive of not only the needs of student constituency, but also of their larger content field of study. They also are designed to meet the needs of the organizations responsible for program assessment and evaluation. Digital curation is a process that can provide such documentation.

Digital curation allows faculty members to enhance their work through the utilization of cross-disciplinary forays and create broader understandings of concepts and topics in ways seldom available in the past. Curating digital resources allows university professors to connect and transcend academic content areas to broader issues such as race, ethnicity, socioeconomic status, gender, disability

status, sexual orientation, religious affiliation, or nationality by bringing resources that are reflective of different perspectives and orientations. Effective curation can be utilized as a vehicle for what Wals (2007) describes as social justice: its perspectives, challenges, and praxis.

The units of information, as well as the materials that we utilize today, may be out of date tomorrow. Curation allows faculty members to capitalize upon the need to preserve for posterity the work that occurs during their tenure. The hyperlinked structure of today's web, with the ability to record and digitally preserve content, allows faculty to articulate, amalgamate, and amplify their voice.

Theoretical Framework for Digital Curation

In an age of easy access and production of media through a variety of technologies, we draw upon the fields of new media literacy studies (Vasquez, Harste, & Albers, 2010) and new literacies studies (Gee, 2010) for developing a framework to better understand how digital curation can facilitate new ways of pooling skills and distilling knowledge to transform teaching and learning. Looking through the lens of new media literacy studies (Vasquez et al., 2010), we propose it essential for university professors to engage in reflective and critical investigations of the materials being considered for curation. Developing multimedia resources through digital curation reflects the orientation, advocacy, and perspectives of not only the creator's local sphere of influence but also that of their larger scholarly community. The efforts of faculty are energized and magnified through Internet access and the availability across all communities of learners, practitioners, teachers, researchers, and citizens.

This process requires the university professor to become critically conscious about his or her own beliefs, to be aware of the larger community voices in their selection for curated materials, and to become an agent for community action in their selections for curation.

In using the lens of new literacies studies (Gee, 2010), we view the process of digital curation as the utilization of different technologies to give and acquire meaning. Technologies provide opportunity for new meanings and conceptualizations of information through which the faculty members amalgamate, re-conceptualize, and repackage content. These technologies also allow for the potential of co-constructed and reconstructed insights and are reflected in the development of the curated instructional materials.

The Five Cs of Digital Curation

We propose that digital curation is a process of five Cs: collect, categorize critique, conceptualize, and circulate based on the framework of new media literacy studies (Vasquez et al., 2010) and new literacies studies (Gee, 2010). This process requires the university professor to become critically conscious about his
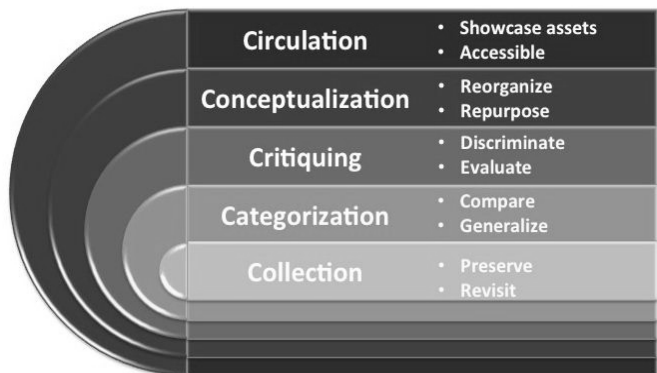
Figure 1. A Digital Curation Framework

or her own beliefs, to be aware of the larger community voices in their selection for curated materials, and to become an agent for community action in their selections for curation. This is reflected in the amalgamation, reconceptualization, and repackaging of items during the digital curation process.

It is essential for faculty members who engage in the process of digital content curation to be aware of and become actively engaged in critical readings in their field of study and of the world. Effective curation is a multistep, developmentally sequenced endeavor; each step leads to the next, with greater and greater refinement of content resulting from the reflective and recurrent process. The five Cs or phases of digital curation are as follows: collection, categorization, critiquing, conceptualization, and circulation.

Collection

Typically, in the collection phase, university faculty engage in amassing items in an effort to preserve them for further study. At this stage, any rational representation of the broad academic topic is considered for digital collection. The collecting of appropriate artifacts for educational purposes has been done for years in specialized fields of study such as museum science, archaeology, and library science. We contend that transformative technologies and access to the Internet have expanded the capabilities of faculty who, in other fields of study, are interested in preserving their work for posterity. This expansion allows them to focus on collecting resources that are broadly similar to their scholarship and academic responsibility as well as their broader field of study.

Comparison and cataloging are two key activities of the collection stage. It is prudent for university faculty to revisit their conceptualization of the items they are collecting. One structure for this is to compare new items collected with existing exemplars. As faculty members engage in a revisiting of the broader theme, they also ensure that current and future collections meet the broad category for inclusion. During the collection phase, it is necessary and appropriate for faculty to document and catalog where their items were acquired from, so that items from future forays can be more easily amassed. Cataloging the collection is an important activity to ensure the integrity of the content, maintain the ethics of the field, and preserve the historical perspective.

Categorization

When a faculty member begins the categorization phase, he or she is primarily concerned with a comparison of the items collected to refine their conceptualization of what the exemplar is to look like. Generalizations are made about broad attributes, and it is incumbent upon the faculty member to identify the aspects of the collection that make these items mutually important and cohesive. It is during this phase that the faculty member critically reflects upon why certain items need to be included and, conversely, why certain items need to be excluded from the conceptualization.

Critiquing

In the critique stage, faculty members perform a more refined exploration of the items they have assembled. They start discriminating, evaluating, and judging the merits of each item in the categorized collection. It is during this stage that university faculty members start aggregating only the most salient exemplars of the topic they are studying. The quality and integrity of the curated material relies heavily upon a critical eye, professional judgment, sound reasoning, and justification for either inclusion or exclusion of items. This process is essential to the growth and development of the academic field. University professionals must take care during this stage to ensure that their work is thorough, objective, data

driven, and research- grounded, so that only the most appropriate items are selected for further inclusion in the curation process.

Conceptualization

The conceptualization of content requires the professor to reorganize the items and materials they are using in such a way that linkages are made between disparate artifacts. It is during this stage that the university faculty also might

It provides the faculty member with an avenue to demonstrate value-added perspectives by making collections available for future academics.

repurpose items selected, so that new truths can be not only identified but also exemplified. During the conceptualization phase, documentation and demonstration of theory take place. It is an opportunity for the faculty member to provide working examples of their theoretical and conceptual frameworks.

Circulation

The last stage of the curation process allows faculty members to circulate their ever-evolving collections. It provides them with an opportunity to showcase assets through the utilization of multimedia, and multidisciplinary and multitheoretical avenues. There are many free content curation tools available on the Internet; selection of these tools is a matter of personal preference.

The circulation of developed and curated items allows the university personnel to have their work shared and saved for posterity. It provides the faculty member with an avenue to demonstrate value-added perspectives by making collections available for future academics.

As the process of digital curation increases in higher education, it is anticipated that multidisciplinary learning communities will become much more interactive. The movement towards open-sourced and open access learning materials will increase the likelihood that curated materials will allow future students and academics to be not just consumers of the curated product but also contributors to future insights and breakthroughs.

Summary

We conclude that digital curation affords university professors a unique opportunity to develop effective teacher education and professional development materials. The five Cs of digital curation is a process that allows university professors to adapt and adopt resources from multidisciplinary fields to meet the educational needs of twenty-first-century learners.

References

Beagrie, N. (2008). Digital curation for science, digital libraries, and individuals. *International Journal of Digital Curation*, *1*(1), 3-16.

Christenson, A. L. (1979). The role of museums in cultural resource management. *American Antiquity*, *44*(1), 161-163.

Gee, J. P. (2010). A situated-sociocultural approach to literacy and technology. In A. E. Baker (Ed.), *The new literacies: Multiple perspectives on research and practice* (pp. 165-193). New York, NY: The Guilford Press.

Scime, E. (2015). The content strategist as digital curator. Retrieved from http://alistapart.com/article/content-strategist-as-digital-curator

Vasquez, V., Harste, J. C., & Albers, P. (2010). From the personal to the worldwide web: Moving teachers into positions of critical interrogation. In A. E. Baker (Ed.), *The New Literacies: Multiple Perspectives on Research and Practice* (pp. 265-284). New York, NY: The Guilford Press.

Wals, A. E. J. (Ed.). (2007). Social learning towards a sustainable world: Principles, practice, and praxis. Retrieved from http://www.wageningenacademic.com/_clientFiles/download/sociallearning-e.pdf

Yakel, E. (2007). Digital curation. *OCLC Systems & Services*, *23*(4), 335-340.

Yakel, E., Conway, P., Hedstrom, M., & Wallace, D. (2011). Digital curation for digital natives. *Journal of Education for Library and Information Science*, 23-31.

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Using the Learning Activities Survey to Examine Transformative Learning Experiences in Two Graduate Teacher Preparation Courses

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The Learning Activities Survey (LAS) detected whether, and to what extent, a perspective transformation occurred during two graduate courses in teacher preparation. The LAS examined the types of learning identified as contributing to their transformative experiences. This study examined pre-service teachers' critical reflection of the course materials and learning experiences in a Capstone course in Reflective Teaching and a course in Universal Design for Learning (UDL). Results suggest that similar learning experiences were identified as triggering a perspective transformation. When learners have the opportunity to engage in critical reflection, they may more easily question their personal perspectives as a result.

Background & Rationale

Developing and raising pre-service teachers' critical consciousness or *conscientização* (Freire, 1970, 1997) is an essential step to preparing them to work as change agents with an increasingly diverse student population. National teacher preparation standards include language around advocacy for diverse learners and families (Council of Chief State School Officers, 2011). The expectation is that teachers will act on the learner variability they find in their classrooms to promote quality instruction and student engagement.

However, pre-service teachers often resist critical education practices that challenge their notions of self (identity), society and their interaction (e.g., Böhmer, & Briggs, 1991; Chan & Treacy, 1996; Gay & Kirkland, 2003; Johnson, 2006; Ukpokodu, 2003). These acts of resistance often prevent reflection on social conditions that would lead to action and hamper teacher educators' ability to train teachers as change agents.

Learner variability in the K-12 school environment is one of the greatest challenges to new teachers (Barge, 2012). New teachers' ability to think beyond traditional efficiency models of instruction on behalf of the myriad of learners in their classrooms is paramount to their success. Learner variability has increased and research has determined that it is context-dependent (Roberts, Park, Brown, & Cook, 2011); therefore, university faculty should also expect that like K-12 students, their college students will display learner variability. Universal Design for Learning (UDL) is one approach to comprehensively address learner variability in any classroom. "UDL applied to teaching and learning provides a lens that focuses targeted approaches on supporting student's affective, strategic and recognition learning networks" (Smith, 2012, p. 31). In other words, to apply UDL to the university classroom, faculty need to scaffold instruction in a way that promotes student learning, addresses prior learning and preconceived ideas, develops a deep understanding of context and facts, and develops a metacognitive approach to learning. Pre-service teachers preparing to work with a diverse classroom need learning experiences that are transformative in nature and design.

This article seeks to explore the use of a survey instrument in identifying whether or not transformative learning has occurred in pre-service teachers and if so, what teaching and learning activities have been identified as contributing to pre-service teacher's transformation? Transformative learning offers a compelling lens through which the development of teachers responding to student variability as change agents can be viewed, and offers the faculty member a way to study one's teaching in order to refine and improve student learning experiences ("SoTL: What Is", 2014). With a focus on the scholarship of teaching and learning (SoTL), this inquiry into student learning advances the practice of teaching by teacher educators by quantifying and qualifying student responses or reactions to their learning experiences (Bender & Gray, 1999).

Universal Design for Learning

Originally developed at the Center for Applied Special Technology (CAST) in the 1980s, the UDL is a framework for curriculum design that emphasizes flexibility in order to account for the variability and diversity of learners. UDL is mentioned in the Higher Education Opportunity Act of 2008 (HEOA) as a scientifically valid framework for guiding educational practice that: (a) provides flexibility in the ways information is presented, in the ways students respond or demonstrate knowledge and skills, and in the ways students are engaged; and (b) reduces barriers in instruction, provides appropriate accommodations, supports, and challenges, and maintains high achievement expectations for all students, including students with disabilities and students who are limited English proficient (National Center on UDL, 2013). UDL draws upon the latest insights from neuroscience and education research, and leverages the flexibility of digital technology to design learning environments that from the outset offer options for diverse learner needs (Meyer, Rose, & Gordon, 2014).

The UDL guidelines were instrumental in the design of the UDL course examined in this inquiry. Students enrolled in the UDL course were explicitly prompted each week to relate their classroom learning to problems and situations encountered in their practice teaching and service learning placements. By design, the course modeled many of the practices and behaviors that educators need to possess in order to successfully implement UDL in their own classrooms. Such

…university faculty should also expect that like K-12 students, their college students will display learner variability.

modeling has been highlighted by CAST as an essential element of the transformation into an effective learning community of expert leaners at the individual level and an expert learning system at the systems level (Meyer et al., 2014). The increasingly "varied student body presents diverse learning needs often not addressed through traditional instructional approaches in higher education" (Roberts et al., p. 5). The persistent questioning of the norms, habits, and techniques of teaching is inherent in both the Capstone in Reflective Teaching and the UDL courses. The learning experiences designed in these courses support the transformation and enactment of the pre-service teacher's personal purpose to make a difference (Fullan, 1993).

Transformative Learning Theory (TLT)

TLT suggests that there are stages that a person experiences that lead to a change in perspective and therefore a new way of acting. TLT offers a framework through which we can detect the nature and extent of a desired perspective transformation. This theory is a popular adult learning theory through which faculty in higher education can understand, design, and even foster experiences that seriously challenge students to assess their perspectives by which they are subsequently changed (Meziow, 1991; Quinnan, 1997). Because teacher educators design learning experiences for teacher candidates in a way that seeks to transform

their knowledge, skills and perceptions to that of professional teachers and in some circumstances that of change agents, this theory offers a compelling lens through which this process can be viewed (Caruana, 2011).

Applying TLT to the development of teachers as social change agents appropriately acknowledges and examines the teachers' struggle to make a critical assessment of their own assumptions and incorporate this transformation into their professional practice (Hammerness et al., 2005). The transformative process ultimately displays enaction in the learner, not simply awareness. Enaction occurs when the pre-service teacher emulates the beliefs and behaviors portrayed in the learning experiences included in their teacher preparation (Jones, 2009). The transformation of one's perspectives is one way in which learning and the enactment of new actions can occur (Mezirow, Taylor, & Associates, 2009). Central to fostering transformative learning however, is an examination of the factors or triggers that cause transformative learning.

Higher education must be a place where teacher candidates are prepared to "think and act dynamically" (Glisczinski, 2007, p. 319); they need to know how to act out their learning in their own lives. Without this ability, teacher candidates become mere teaching technicians following the prescription of a linear path that does not exist in a non-linear post-modern world. For this reason, we have chosen transformative learning theory to frame this study.

Method

Participants & Courses

Three faculty members in the School of Education distributed the Learning Activities Survey in sections of two different graduate level accelerated courses: a UDL course and a Capstone in critical reflection. A total of 55 students from two courses participated in the LAS. However, data from six (6) special education pre-service teachers was too small of a sample to draw any meaningful conclusions. Analyses were based on a reduced sample of 49 participants. All of the students were graduate students from a private Western college for professional studies within a liberal arts university. All of the students were seeking teaching certification through a master's program. There were a total of 34 students in the Elementary Education program, nine students in the Secondary Education program, six students in the Special Education program, and one student in the Early Childhood Special Education program. The age of the students ranged from 25 – 29. Forty-two of the students were female and seven were male. The majority of the students were White, non-Hispanic (n=42) except for seven who identified as either Black, non-Hispanic or Hispanic. These demographics were representative of students in this program at this university.

In an effort to cultivate teachers as change agents, a Capstone course in critically reflective teaching was developed in a graduate teacher education program at this institution. The course was delivered during accelerated eight week terms during the 2011-2012 academic year in both online and face-to-face formats. Part of the intent of this Capstone course, in which the LAS was used, was to provide experiential learning that was consciousness-raising in order that pre-service teachers would become aware of their own and others' beliefs and hopefully provide opportunities for them to question their personal perspectives. Forty-eight pre-service teachers participated in the survey out of the five sections of the course.

The second course, Universal Design for Learning: a framework for teaching and learning, was also delivered during accelerated eight week terms during the 2013-2014 academic year in both online and face-to-face formats. The research questions for this study addressed the problem of whether including a dedicated course in UDL as part of a teacher preparation program impacts the participants' ability to address learner variability in their own practice as a result. Seven pre-service teachers participated in the survey out of the two sections of the course.

Faculty in both courses sought to provide learning experiences that might trigger a transformation in the pre-service teachers' perspectives and then take action in their new understanding. Participants engaged in similar learning activities in both courses.

Procedures & Measures

This mixed method study employed survey research which included a keyword analysis of the two open ended questions included in the survey. The Learning Activities Survey (LAS) was developed by Kathleen King (2009) to indicate the presence and possible triggers of transformative learning and was adapted to contain the kinds of activities included in the course. The LAS was administered at the end of an eight week term to 48 graduate teacher licensure students who were enrolled in one of five sections of the Capstone course during the 2010-2011 academic year. The LAS was then administered at the end of an eight week term to seven graduate teacher licensure students enrolled in one of two sections of a course in UDL during the 2013-2014 academic year.

The Learning Activities Survey (LAS). We chose to employ the LAS as a way to obtain data about the transformative learning experiences in the sample as well as to identify meaningful learning experiences by participants. The LAS was developed to detect, identify, and categorize transformative experiences (King, 1997) in the higher education context. The expressed purpose of the LAS is to identify "whether adult learners have had a perspective transformation in relation to their educational experience; and if so, determining what learning activities have contributed to it" (King, 2009, p. 14). The instrument has four major parts: Part 1 identifies the stages of perspective transformation; Part 2 determines which learning experiences may have contributed to the perspective transformation (PT); Part 3 consists of a series of questions designed to determine in which of the learning activities participants have engaged; and Part 4 collects information on demographic characteristics of the respondents that are suggested from the literature on transformative learning theory.

The original LAS was adapted for use with pre-service teachers according to the guidelines provided by the survey's developer (King, 2009) which included modifying the PT (Perspective Transformation) Index definitions to match the unique context of this study. We also changed the learning activities (Items 4 and 7) and demographic questions (Items 10-14) to be more appropriate for pre-service teachers. Items 1, 2, 3, and 5 are those used to establish the PT-Index and were not changed so as not to affect the validity of the instrument.

Reliability of the LAS was addressed by the developer (King, 2009) in a unique manner due to the fact that the instrument is administered at different points in time and might elicit responses about different perspective transformation experiences. For this reason a "hermeneutical perspective" (Gall, Gall, & Borg, 2003, p. 505) using several evaluations to arrive at a final evaluation was employed to establish reliability. A hermeneutic perspective considers differences as parts to be interpreted "until they can be reconciled into a satisfactory overall interpretation that provides an understanding of the differences" (p. 217). Through this process, the reliability of the LAS was strengthened.

The LAS that was modified for both the Capstone course and the UDL course included 25 questions: 18 multiple choice questions, two open ended questions, and five demographic questions. The survey was deployed using SurveyMonkey through a link given to participants at the end of their course. A copy of the survey used in both the Capstone and UDL courses are included in Appendix A. An overall PT-Index is obtained from this instrument. The PT-Index is a single score derived from Items 1, 2, 3, and 5 of this instrument and indicates whether participants experienced a perspective transformation in his or her educational experience. PT1 indicates that the participant does not believe they

have had a transformative experience within this context. PT2 indicates that the participant believes they've had a transformative experience due to something outside of those learning experiences designed by teacher educators (e.g., experiences within or connected to their student teaching experience). PT3 indicates that the participant believes they've had a transformative experience due to the learning experiences designed by teacher educators in their course.

Results

To address the first research question, whether and to what extent the learning activities designed within two teacher preparation courses impacted the pre-service teachers' abilities to address learner variability in their own practice, a calculation of percentage was conducted on the LAS across both courses. In the Capstone course, results indicated more than one third of those who experienced transformative learning reported that both verbally discussing their assumptions/beliefs/values (40%) and personal reflection (40%) contributed to the perspective transformation. If we rank these activities by their contribution, the following were indicated most frequently by those who experienced transformative learning: (1) 40% indicated verbally discussing their assumptions/beliefs/values, (2) 40% indicated personal reflection, (3) 33% indicated writing about their assumptions/beliefs/values, and (4) 27% indicated class/group projects. Although 16 learning experiences were included in the LAS, these learning experiences in particular were stronger indicators of transformation than other activities and offered participants as opportunity to work through their transformative process during their Capstone course.

…71% (*n*=35) indicated experiencing transformative learning while enrolled in the courses.

In the UDL course results indicated that more than three quarters of those who experienced transformative learning reported that the following learning experiences contributed to their transformative process: (80%) readings in textbook, (80%) discussion questions, (80%) service learning experiences, (80%) school field experience, and (80%) personal reflection. There is an equal distribution across five of the six surveyed learning experiences in the UDL course. A copy of the personal reflection cited as contributing to the participants' transformative process is included in Appendix B.

To determine if the use of the LAS effectively detected transformative learning experiences of participants, items 1, 2, 3, and 5 were those used to establish the PT-Index from participants in both the Capstone and the UDL courses. PT3 indicates that the participants believe they have had a transformative experience due to the learning experiences designed by teacher educators in their Capstone course. PT2 indicates that the participants believe they have had a transformative experience due to something outside of those learning experiences designed by teacher educators (e.g., experiences within or connected to their student teaching experience). For the purposes of this analysis, PT2 and PT3 were combined because both are indicators of a perspective transformation (*n*=31).

Out of 49 pre-service teachers surveyed, 71% (*n*=35) indicated experiencing transformative learning while enrolled in the courses. In addition, approximately 73% (*n*=25) of the Elementary pre-service teachers (*n*=34) indicated transformative learning, while approximately 72% (*n*=8) of the Secondary pre-service teacher candidates (*n*=11) indicated experiencing transformative learning. Although six (6) special education pre-service teachers were surveyed, the *n* was too small to draw any meaningful conclusions.

A second level of content analysis (keyword) was conducted to determine which types of interactions were referenced by participants in the two open ended questions of the LAS., all of which indicated having a transformative experience (PT2 or PT3). A sample of the keyword analysis results appear in Table 1.

Table 1

Keyword Analysis to the Question 'Was it a Person Who Influenced this Change?'

Participant ID Code	Examples	Keyword
SP103W	"Through research of proven theories"	Research
SP104W	"The books and literature we read about 'the invisible backpack,' the 'hidden curriculum' and teaching the 'hidden rates of the middle class'	Research
SP106H	"Texts read in class"	Research
SU103W	"Research studies; in-class conversations; gathering data and comparing best practices with observed practices"	Research
SP101W	"Student and parents I met while student teaching"	Student
SP101O	"In addition to the students themselves"	Student
SU104K	"My students"	Student
SP102H	"My background gave me some insight into my students' lives"	Student
SP105K	"Getting to know my own students helped me to realize this, reflecting in class helped me understand the importance"	Student
SP107W	"I participated in a home visit/special education students that changed my thinking on home life for students and behavior in the classroom"	Student
SP109W	"My students"	Student
SU102W	"Working with parents of my students"	Student

Note. 'Keyword' denotes codes used in analysis.

Approximately 30% (*n*=11) of those who responded to the open ended question and experienced a perspective transformation indicated that interacting with their students influenced their change. Additionally, 10% (*n=15*) of those who responded to the open ended questions and who experienced a perspective transformation indicated that learning about learner variability influenced their change. Twenty-five percent (*n*=9) of participants did not complete the open-ended question.

Discussion

The purpose of this study was to expand the use of the LAS by administering it to graduate pre-service teachers in two courses that provided learning experiences meant to trigger a perspective transformations at the end of an eight week course and to identify which of the teacher educator designed learning experiences were considered a part of that perspective transformation by the pre-service teachers. By conducting the LAS at the end of the courses and analyzing the data well after the courses ended it offered the faculty a retrospective of the learning experiences so that they could then make strategic changes in future courses to provide meaningful experiences that may trigger a perspective transformation. By examining the learning experiences in two different courses that had similar outcomes, it provides for a more comprehensive evaluation of whether and to what extent teacher educators affect a desired shift in the perspectives in pre-service teachers at the graduate level. In both courses, personal reflection was cited as a learning experience that contributed to the participants' perspective transformations.

…suggesting that there is potential for teacher educators to design learning experiences that trigger transformation.

The results indicated that there was a perspective transformation toward addressing learner variability by pre-service teachers at the end of both of these courses; suggesting that there is potential for teacher educators to design learning experiences that trigger transformation. When learners have the opportunity to engage in learning experiences that center on critical reflection and rationale dialogue, they more easily question their personal perspectives and move toward taking action as a result.

Future Research & Limitations

Further examination of the perspective transformations of adult learners with regard to their prior position in the transformative process is warranted. For example, those that did not indicate they had a perspective transformation may already embody the perspectives of change agents; therefore, they did not experience a shift in their perspectives. Repeating this study at another point in the teacher preparation process may also be of value. For example, the UDL course occurs during the first few courses in the program sequence and the Capstone course occurred at the end of the sequence; it might be prudent to determine if transformative learning is occurring at the midpoint of the program as well to see if there are continual opportunities to move toward the expected outcomes. Although these results represent the perspective transformations of these selected participants, the small sample size does not allow for generalizability to a larger population. Instead it does generalize to theory as there is evidence to support the application of transformative learning theory. In addition, it would be interesting to examine if the format of the course (online or face to face) made a difference.

Conclusion

This study sought to examine the use of the LAS to detect if and to what extent pre-service teachers enrolled in two graduate level courses had a perspective transformation, and to better understand what, if any, teacher educator-developed learning experiences may have contributed to that perspective transformation. The findings indicated that learning experiences that were rich in critical reflection and offered opportunities for rational dialogue both triggered perspective transformation and were identified as meaningful by participants. This research shows that when participants experience a perspective transformation, they are engaged in transformative learning that then may lead to enaction. However, no causal links have been determined through this inquiry. Teacher educators can provide

transformative experiences and improve their own practice by developing those experiences that trigger transformation and therefore meet their expressed program or student learning outcomes.

References

Barge, J. D. (2012). *Fact Sheet 4: Standard 2: Instructional planning*. Retrieved from Georgia Department of Education, Teacher Keys Effectiveness System Fact Sheets website: http://www.gadoe.org/School-Improvement/Teacher-and-Leader-Effectiveness/Documents/TKES%20Fact%20%20Sheets%207-11-2012.pdf

Bender, E., & Gray, D. (1999, April). The scholarship of teaching. *Research and Creative Activity*, *22*(1). Retrieved from Indiana University, Office of Research and the University Graduate School website: http://www.indiana.edu/~rcapub/v22n1/p03.html

Böhmer, S., & Briggs, J. L. (1991). Teaching privileged students about gender, race, and class oppression. *Teaching Sociology*, *19*, 154-163. doi: 10.2307/1317846

Caruana, V. (2011). *Preservice teachers' perceptions of their perspective transformations: A case study* (Doctoral dissertation). Retrieved from University of South Florida, Graduate Theses and Dissertations website: http://scholarcommons.usf.edu/etd/3034

Chan, C. S., & Treacy, M. J. (1996). Resistance in multicultural courses. *American Behavioral Scientist*, *40*(2), 212-222. doi: 10.1177/0002764296040002012

Council of Chief State School Officers. (2011, April). *Interstate teacher assessment and support consortium (InTASC) model core teaching standards: A resource for state dialogue (April 2011)*. Washington, DC: Author. Retrieved from http://www.ccsso.org/Resources/Publications/InTASC_Model_Core_Teaching_Standards_A_Resource_for_State_Dialogue_(April_2011).html

Freire, P. (1970). *Pedagogy of the oppressed*. New York, NY: Herder and Herder.

Freire, P. (1997). *Education for critical consciousness*. New York, NY: The Continuum.

Fullan, M. (1993). Why teachers must become change agents. *The Professional Teacher*, *50*(6), 12-17. Retrieved from http://www.ascd.org/publications/educational-leadership/mar93/vol50/num06/Why-Teachers-Must-Become-Change-Agents.aspx

Gall, M. D., Gall, J. P., & Borg, W. R. (2007). *Educational research* (8th ed.). Boston, MA: Allyn & Bacon.

Gay, G., & Kirkland, K. (2003). Developing cultural critical consciousness and self-reflection in preservice teacher education. *Theory into Practice*, *42*(3), 181-187. Retrieved from http://www.wou.edu/~tmcwilliams08/Developing%20Cultural%20Critical%20Consciousness_files/ContentServer.pdf

Glisczinski, D. J. (2007). Transformative higher education: A meaningful degree of understanding. *Journal of Transformative Education*, *5*, 317. doi: 10.1177/1541344607312838

Hammerness, K., Darling-Hammond, L., Bransford, J., Berliner, D., Cochran-Smith, M., McDonald, M., & Zeichner, K. (2005). *Preparing teachers for a changing world: What teachers should learn and be able to do*. San Francisco, CA: Jossey-Bass.

Johnson, A. G. (2006). *Privilege, power, and difference* (2nd ed.). Boston, MA: McGraw-Hill.

Jones, M. (2009). Transformational learners: Transformational teachers. *Australian Journal of Teacher Education*, *34*(2), 14-27. Retrieved from http://ro.ecu.edu.au/cgi/ viewcontent.cgi?article=1346&context= ajte

King, K. P. (1997). Examining learning activities and transformational learning. *International Journal of University Adult Education*, *36*(3), 23-37. Retrieved from Interaction Design Foundation: A Global Community of the World's Best Designers website: https://www.interactiondesign.org/refer ences/periodicals/international_journal_ of_university_adult_education.html

King, K. P. (2009). *Handbook of the evolving research of transformative learning based on the learning activities survey (10th anniversary ed.).* Charlotte, NC: Information Age Publishing.

Meyer, A., Rose, D., & Gordon, D. (2014). *Universal design for learning: Theory and practice*. Wakefield, MA: CAST.

Mezirow, J. (1991). *Transformative dimensions in adult learning*. San Francisco, CA: Jossey-Bass.

Mezirow, J., Taylor, E., & Associates. (2009). *Transformative learning in practice: Insights from community, workplace, and higher education*. San Francisco, CA: Jossey-Bass.

National Center on UDL. (2013). How has UDL been defined? Retrieved from http://www.udlcenter.org

Quinnan, T. (1997). *Adult students "at-risk": Culture bias in higher education*. Westport, CT: Bergin and Garvey.

Roberts, D., Park, H. J., Brown, S., & Cook, B. (2011). Universal design for instruction in postsecondary education: A systematic review of empirically based articles. *Journal of Postsecondary Education and Disability*, *24*(1), 5-15. Retrieved from https://www.ahead.org/uploads/publicat ions/JPED/jped_24_1/JPED%2024_1%2 0FINAL%20DOCUMENT.pdf

Smith, F. (2012). Analyzing a college course that adheres to the universal design for learning (UDL) framework. *Journal of the Scholarship of Teaching and Learning*, *12*(3), 31-61. Retrieved from http://files.eric.ed.gov/fulltext/EJ992116 .pdf

SoTL: What is the scholarship of teaching and learning (SoTL)? (2004). Retrieved from University of Central Florida, Karen L. Smith Faculty Center for Teaching and Learning website: http://www.fctl.ucf.edu/ ResearchAndScholarship/SoTL/

Ukpokodu, O. (2003). Teaching multicultural education from a critical perspective: Challenges and dilemmas. *Multicultural Perspectives*, *5*(4), 17-23. doi: 10.1207/S15327892MCP0504_4

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Faculty Perception of Support to Do Their Job Well

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Research has commonly suggested that adequate and appropriate mentoring and faculty perception of support for a work-life balance are important factors in the recruitment, development, and retention of university faculty. To better understand the role of these factors in faculty job performance at teaching universities, faculty from such a university were surveyed about their experiences with these forms of support and the factors that influenced their perception of the ability to do their job well. Results indicate that faculty mentoring was an important predictor for support at the department level. Additionally, perceived work-life balance was a significant factor at the college and university levels.

In the last 20 years, the academy has been pressured to turn the tables on itself and research the academic environment and lives of faculty members. These pressures are based on scrutiny from a wide range of sources including the media, legislatures, administration, and even students themselves. At the same time as public institutions across the country are seeing decreases in financial support, they are seeing increased pressures related to work productivity, student learning (Rosser, 2004), and preparation of graduates for future employment. O'Meara, Terosky, and Newmann's (2008) review of literature suggests that the pervasive themes regarding the "assessments of the current condition of the academic profession" (p. 17) are overwhelmingly negative. In what they refer to as the "narrative of constraint," O'Meara et al. note that the story being told by and about academics focuses not on the many accomplishments of faculty but rather on a lack of support (especially for women and faculty of color), increasing expectations for performance, and the barriers to success. While the story being told about faculty performance is negative, faculty's perception of at least *some* support is still important for them to do their job well. Therefore, it is important that research examine the factors that can contribute to this perception of support, including demographics, mentoring, and a balance between work life and home life. It is equally important that university administration understand this research and implement structural supports for recruiting and retaining faculty.

It is equally important that university administration understand this research and implement structural supports for recruiting and retaining faculty.

Professional development has long been considered necessary for workers across fields to continually improve their work performance. University faculty are no different. At our mid-sized, Midwestern, unionized, public, teaching-focused university, the past ten years have seen dramatic shifts in what faculty professional development encompasses. Changes in the economic security of higher education,

the demographics of incoming faculty, and available technology have all impacted our professional development programs. A decade ago, incoming faculty were welcomed into a faculty-led group mentoring program. This program allowed new faculty across campus to interact with one another, provided access to key players on campus, and provided early-career faculty with a necessary introduction to university life. A good economic situation also allowed grants to be awarded to new faculty for professional development activities, in areas of both teaching and scholarship. However, as the demographics of incoming faculty changed (from early- to mid-career faculty) and the economy turned downward, the face of professional development also changed. More recently, the professional development of faculty (new and midcareer) has been divided among multiple groups. The human resources office now provides an orientation to benefits and the university structure. The faculty union structure provides for workshops and resources regarding tenure and promotion, as well as contractual, annual financial support for professional development activities (primarily travel). And a new faculty-focused technology center provides training and support for various forms of technology. No longer provided are the small-group conversations with colleagues and intimate introductions to administrators.

In light of the ebb and flow of professional development on our campus (and campuses across the country), this study seeks to identify the factors that contribute to support from departments, colleges, and the university as perceived by faculty working to do their jobs well. Faculty members were asked to evaluate the university environment as it pertained to professional development in the context of current workplace practices. This research was completed during a time of administrative transition and immediately following the economic downturn that impacted most public educational institutions.

Review of Literature

Professional Development

As long ago as 1810, when Harvard instituted sabbatical leave, colleges and universities have included professional development as an important institutional goal. Much in these early programs focused largely on increasing research expertise and promoting faculty as scholars in their respective fields. By the 1950s and 1960s, professional development expanded to include a focus on a faculty member's development as a teacher as well as a scholar. Sorcinelli, Austin, Eddy, and Beach (2006) suggested that more recently, the emphasis of professional development has transitioned further to curriculum development, continued preparation, and now networking. This newer focus better reflects the nature of teaching institutions, like ours.

Given this new framework of professional development, faculty now need additional forms of support and resources to develop as both educators and scholars. Sorcinelli (2000) outlines best practices for supporting early-career faculty. Early and frequent communication and feedback, performance review, and flexibility are necessary for promoting productive faculty members. She also notes that professional development strategies need to be individualized rather than "one-size-fits-all." Specifically, she notes the importance of special career guidance and flexible tenure clocks. Rice, Sorcinelli, and Austin (2000) suggest that support from senior faculty, chairs, deans, and other campus leaders is imperative to attracting, developing, and retaining faculty. Mentoring by senior faculty and department chairs, advocating for newer faculty members, and providing guidance and resources as they navigate the university systems are all necessary for faculty development. Sorcinelli (2000) also indicates that fostering a balance between the professional and personal lives of faculty augments faculty development.

Faculty Mentoring

In general, faculty members report that the perception of support is crucial to their career development and success. Mentoring is one of the key factors in whether or not faculty feel supported to do their jobs well. Van Eck Peluchette and Jeanquart (2000) found that those who had significant mentoring from multiple sources, whether in the early or middle stages of their careers, experienced the highest levels of both objective and subjective success; those without mentors were likely to experience lower objective and subjective success. Schrodt, Cawyer, and Sanders (2003) show that new faculty who are mentored report greater career satisfaction than those who are not; more specifically, they feel "more connected to their work environments" and express "a greater sense of ownership over their departments" (p. 20) than those who are not mentored.

Faculty mentoring, Sorcinelli (2000) noted, as is the case with faculty development in general, needs to be individualized. For some (i.e., women and faculty of color), mentoring tends to be collectivist or peer mentoring. For others (i.e., white men), it is the traditional one-to-one, senior faculty mentor-to-junior faculty protégé model (Hollenshead & Thomas, 2001). Boyle and Boice (1998) report that although "tradition holds that the best mentoring occurs spontaneously, without intervention by faculty developers" (p. 159), only about one-third of new faculty find such "natural" mentoring; women and minorities are least likely to find such spontaneous mentoring. In contrast, white men are the ones who receive and benefit most from such "natural" mentoring in academia. Wasburn (2007) shows that although formal mentoring programs are often less effective than informal ones, leaving mentoring to chance is not effective, as most faculty will not, in these circumstances, be mentored. Boyle and Boice (1998) argue that systematic mentoring works better than spontaneous, natural mentoring, as it is more regular, longer lasting, and more likely to involve those (both mentors and protégés) who are often left out of "natural" mentoring. An important component of faculty development strategies is to understand the individual needs of faculty, and for faculty developers to craft programs to address these needs.

Faculty Work/Home Balance

Little has been written about the balance between faculty's work life and home life or their perceptions of this work-life balance. Instead, the literature overwhelmingly addresses only the worklife of faculty. In fact, some research has referred to homelife simply as life away from work (Sorcinelli & Near, 1989). Research on worklife has previously focused on quality of worklife (Johnsrud & Rosser, 2002), satisfaction (Blackburn & Lawrence, 1995; Bozeman & Gaughan, 2011; Rosser, 2005) and retention (Johnsrud & Heck, 1994; Matier, 1990; Rosser, 2004; Smart, 1990). These areas of worklife have been conceptualized in different ways. To be sure, quality of worklife and faculty satisfaction with their jobs will likely influence retention rates, especially in light of issues of support (such as mentoring) and resources.

Quality of worklife is paramount to faculty members' performance (Johnsrud & Rosser, 2002) and their perceptions of quality of life (Johnsrud & Heck, 1998). Professional priorities and rewards, administrative relations and support, and the quality of benefits and services are among the dimensions that define the quality of faculty worklife. It appears that morale is tied to these dimensions. Morale seems to be the component of quality of worklife that influences satisfaction and ultimately whether a faculty member decides to leave a university (Johnsrud & Rosser, 2002). Because the quality of worklife is tied closely to worklife satisfaction and retention, it is important for faculty developers to consider these components of faculty worklife and foster a balance between the professional and personal lives of faculty, as Sorcinelli (2000) stated.

Methods

To address the concerns of mentoring and work/home balance, among other common faculty concerns, a questionnaire was developed based on the outcomes of small semi-structured faculty focus groups about improving the work environment, which resulted from a faculty-wide call for participation. The questionnaire was then administered to the full faculty. Using an online survey tool, the questionnaire included questions designed to address the themes identified in the focus groups, as well as demographic questions. This questionnaire was sent to the 559 members of the faculty at our university. One-hundred and thirty faculty members responded to the questionnaire, eliciting 104 complete questionnaires for a valid response rate of 18.6%.

The three dependent variables are *department*, *college*, and *university*. Each of these variables is based on the same base question: "I am supported by my ___ (department, college, or university) to be able to do all aspects of my job well." These responses were recoded into accurate (1) and not accurate (0). There are two primary independent variables: *balance* and *mentoring*. *Balance* was defined as faculty perception of university support for a home/work life balance. *Mentoring* was defined as faculty perception of university support for mentoring activities. Additionally, three demographic variables were included in the analyses: *sex/gender*, *ethnicity*, and *length of time employed*.

The data were analyzed to determine the relationship between our independent and dependent variables. A series of regression analyses were estimated for the three dependent variables. For each of the dependent variables, logistic regressions were used to predict perceived level of support from department, college, and university related to the item: "to do all aspects of my job well." Models were estimated (results not shown) using the independent and demographic variables to predict each of the three dependent variables.

Results

While 130 faculty members completed a portion of the questionnaire, 104 valid and complete responses were recorded. The demographic results described below include only respondents who had complete responses to the questionnaire. Fifty percent of the sample has worked at the university for 10 years or fewer, with 21% of faculty in the sample having worked at the university for more than 20 years. Sixty-one percent reported their gender as female, 34% reported as male, and 5% reported that they preferred not to answer. No participants identified as intersex, transgender, or another gender non-conforming response. Eighty-one percent reported their ethnicity as non-Hispanic white, whereas 11% reported that they preferred not to answer. Half of the sample indicated their rank as Assistant or Associate Professors, a third are Full Professors, and the remainder are faculty not on the tenure track. About a third reported teaching in our largest college, Liberal Arts, while another third teach in the Colleges of Education and Nursing and Health Sciences. There were no significant gender differences in length of employment, college, or rank. The distribution of ethnicity among our sample is not large enough to conduct similar bivariate analyses.

Approximately one-quarter of the respondents strongly agree or agree with each of the following: they perceive support for faculty mentoring (26%) and that the university supports faculty in a work/home balance (27%). Faculty members were asked to rate how accurate the following statements were: "I am supported by my department/college/university to be able to do all aspects of my job well." Responses of "very accurate" and "accurate" were combined, and "not at all accurate," "somewhat accurate" and "neutral" were combined. Approximately half of respondents reported being supported by their departments to be able to do all aspects of their job well. Slightly less than half (43%) feel supported by their

college to do all aspects of their job well, and one-third (35%) feel supported by the university to do all aspects of their job well.

Multivariate regression (results not shown) was used to predict each of the three dependent variables. For the first statement, "I am supported by my department to be able to do all aspects of my job well," none of the demographic variables significantly predicted agreement. However, perceived support for mentoring was a significant predictor (1.048, p<.001). For the second statement, "I am supported by my college to be able to do all aspects of my job well," the only significant predictor of agreement is perceived support for work/home balance. Similarly, for the third statement, "I am supported by the university to be able to do all aspects of my job well," only perceived support for work/home balance significantly predicts agreement.

Discussion

The purpose of this study was to examine the factors related to perceived support from three levels of administrative structure (department, college, and university) in order for faculty to do their jobs well. Overall, one-quarter of faculty agreed with each of the items suggesting that there was moderate university support for mentoring and that the university supported faculty's work/home balance. In these two areas, there appears to be an underwhelming level of support perceived by faculty. Additionally, half of faculty perceived support from their department, 42% perceived support from their college, and 35% perceived support from the university to do all aspects of their job well. This is an indicator that faculty at this university tend to feel more supported by structures closer to them (i.e., departments more than colleges, and colleges more than the university), which supports Johnsrud and Heck's (1994) work. In predicting perceived departmental support, mentoring was the only significant variable across four models. However, at the college and university levels, perceived support for faculty work/home balance significantly predicted faculty's ability to do their job well.

In order for faculty to do their job well, an effective faculty development program is necessary. Mentoring and work/home balance are certainly two components of such a program. Previous research has clearly suggested that appropriate mentoring needs to be individualized (Sorcinelli, 2000) and flexible (Davis et al., 2003). A mentoring program also needs to be systematic, as naturally occurring mentoring does not often occur for some groups (i.e., women and faculty of color) (Boyle & Boice, 1998). It is also important for faculty members, administrators, and institutions alike to understand the connection between faculty satisfaction (and ultimately professional success) and the balance of worklife and homelife (Johnsrud & Rosser, 2002). Unfortunately, specific solutions to the imbalance between work and homelife are not obvious and likely require a paradigm shift in higher education. However, it is recommended that department heads, deans, and other administrators consider the effects of mentoring and other forms of support (such as family leave, sick time, personal days, buyout time for curriculum development, research funding, leadership opportunities, and time for collaborations) on recruitment, development, and retention of faculty. This consideration should take into account the unique needs and issues of faculty and universities.

…faculty at this university tend to feel more supported by structures closer to them (i.e., departments more than colleges, and colleges more than the university)…

Further emphasizing Sorcinelli's (2000) point regarding the need for individualized connections, research suggests that faculty development programs, more broadly, also need to reflect institutional identity (Davis et al., 2003). As institutions consider faculty development programming, it is important to acknowledge that much of the previous research and best practices were completed at research-focused universities. Our university, however, is an undergraduate, teaching-focused state university. Research-heavy institutions typically prioritize

scholarship over teaching and service, whereas teaching institutions often prioritize teaching and service over scholarship. Hence, most of the research conceptualizes "satisfaction" of work and faculty development resources in terms of the ability to complete scholarship rather than to teach effectively. Matier (1990) suggests that perceived support and satisfaction are often related to issues such as administrative support (in the forms of graduate assistants and clerical support) and rewards (often defined by salary and grant support). These forms of support are not readily available at most teaching institutions.

While much of the research in this area focuses on research intensive universities, there are still some broad recommendations for consideration in the design of faculty development programs for all types of institutions, bearing in mind that programs should be tailored to the faculty unique to each university. First, faculty development programs need to be faculty-driven (Davis et al., 2003; Eble & McKeachie, 1985). When faculty members are an integral part of the creation of faculty development programs, they feel ownership over them. Second, having administrative support is necessary to provide required resources and to acknowledge the legitimacy of faculty development as an effective use of faculty time. Davis and colleagues (2003) recommend faculty development as a permanent structure (with permanent space and regularly available resources) that is embedded in the identity of the institution. Finally, the structure of the programming should be broad and flexible, allowing faculty to choose components of the programming that meet their professional goals.

When faculty members are an integral part of the creation of faculty development programs, they feel ownership over them.

In conclusion, mentoring and work/home balance are important aspects of faculty's perception of support for doing their job well, as well as their perceived ability to do so. These factors impact faculty satisfaction, which in turn affects faculty development, productivity, and retention. Thus, it is imperative that universities evaluate their practices related to mentoring and expectations related to worklife for their impact on homelife and vice versa, in order to insure that faculty perceives support to perform all aspects of their job well.

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References

Blackburn, R. T., & Lawrence, J. H. (1995). *Faculty at work: Motivation, expectation, satisfaction*. Baltimore, MD: Johns Hopkins University Press.

Boyle, P., & Boice, B. (1998). Systematic mentoring for new faculty teachers and graduate teaching assistants. *Innovative Higher Education*, *22*(3), 157-179.

Bozeman, B., & Gaughan, M. (2011). Job satisfaction among university faculty: Individual, work, and institutional determinants. *Journal of Higher Education*, *82*(2), 154-186.

Davis, G., Foley, B. J., Horn, E., Neal, E., Redman, R., & Van Riper, M. (2003). Creating a comprehensive faculty development program. *The Journal of Faculty Development*, *19*(1), 19-28.

Eble, K. E., & McKechie, W. J. (1985). *Improving undergraduate education through faculty development*. San Francisco, CA: Jossey-Bass.

Hollenshead, C., & Thomas, G. D. (2001). Resisting from the margins: The coping strategies of black women and other women of color faculty members at a research university. *Journal of Negro Education*, *70*(3), 166-175.

Johnsrud, L. K., & Heck, R. H. (1994). A university's faculty: Predicting those who will stay and those who leave. *Journal for Higher Education Management*, *10*(10), 71-84.

Johnsrud, L. K., & Rosser, V. J. (2002). Faculty members' morale and their intentions to leave: A multilevel explanation. *Journal of Higher Education*, *73*(4), 518-542.

Matier, M. W. (1990). Retaining faculty: A tale of two campuses. *Research in Higher Education*, *31*(1), 39-60.

O'Meara, K. A., Terosky, A. L., & Neumann, A. (2008). Faculty career and work lives: A professional growth perspective. *ASHE Higher Education Report*, *34*(3), 1-22.

Rice, R. E., Sorcinelli, M. D., & Austin, A. E. (2000). *Heeding new voices: Academic careers for a new generation.* New Pathways Inquiry #7. Washington, DC: American Association for Higher Education.

Rosser, V. J. (2005). Measuring the change in faculty perceptions over time: An examination of their worklife and satisfaction. *Research in Higher Education*, *46*(1), 81-107.

Rosser, V. J. (2004). Faculty members' intentions to leave: A national study on their worklife and satisfaction. *Research in Higher Education*, *45*(3), 285-309.

Schrodt, P., Cawyer, C. S., & Sanders, R. (2003). An examination of academic mentoring behaviors and new faculty members' satisfaction with socialization and tenure and promotion processes. *Communication Education*, *52*(1), 17-29.

Smart, J. C. (1990). A causal model of faculty turnover intentions. *Research in Higher Education*, *31*(5), 405-424.

Sorcinelli, M. D. (2000). Principles of good practice: Supporting early-career faculty: Guidance for deans, department chairs, and other academic leaders. *American Association for Higher Education*.

Sorcinelli, M. D., Austin, A. E., Eddy, P. L., & Beach, A. L. (2006). *Creating the future of faculty development: Learning from the past, understanding the present*. San Francisco, CA: Jossey-Bass.

Sorcinelli, M. D., & Near, J. P. (1989). Relations between work and life away from work among university faculty. *The Journal of Higher Education*, *60*(1): 59-81.

Van Eck Peluchette, J., & Jeanquart, S. (2000). Professionals' use of different mentor sources at various career stages: Implications for career success. *Journal of Social Psychology*, *140*(5), 549-564.

Wasburn, M. H. (2007). Mentoring women faculty: An instrumental case study of strategic collaboration. *Mentoring and Tutoring: Partnership in Learning*, *15*(1), 57-72.

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Coming Home to School: Challenges and Strategies for Effective Teaching with Military Veterans

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This article is an analysis of the unique needs of returning service members at the college or university level that impact the teaching decisions made by instructors. The article also discusses the challenges that service members are individually addressing while acclimating themselves to their new environment of learning. With the reduction in forces occurring after the Iraq and Afghanistan wars, many higher level learning institutions are struggling to adequately meet the needs of returning veterans. In turn, veterans often find that the style of instruction and the general college-level universe are difficult to negotiate. The combination of these factors can often result in veteran students performing below expectation or leaving school without finishing. The article proposes a variety of ways to understand and address these challenges including the use of Scholarship of Teaching and Learning (SoTL) strategies and characteristics.

The Unique Challenges of Returning Veteran Students

Ever since the American Revolution, after a military conflict has come to a close, there follows a military stand down or a reduction in the number of troops needed in the US military. The budgetary demands of keeping a large armed force at the ready can become prohibitive, resulting in the need to send many veterans back to civilian life. There may also be a multitude of other reasons why soldiers return to their previous lives or unexpectedly find themselves in civilian life after a number of years of military service. Thanks to GI Bill benefits and the need to find a job in the civilian world, colleges and universities across the nation historically have found an influx of veteran students in classrooms after combat is over (Cozza, 2015).

The situation of veterans has been no different in recent times. It has been a decade since the September 11th attacks on the World Trade Center, and more than two million American military personnel have been deployed to Iraq, Afghanistan or both since August 2001. More than half of those who have served in Iraq and Afghanistan have been deployed more than once. As in the past, Americans now find themselves, as a society, in the position of managing a reduction in forces as the US gradually withdraws from both battle theaters. As the military presence draws down and the defense budget begins to shrink, thousands of service men and women have begun to transition from military service to the workforce and/or to college (Cozza, 2015).

According to Schafer (2014), the Army is downsizing to 490,000 troops from its current level of 522,000. Defense Secretary Hagel has proposed even steeper cuts in his most recent budget proposal, recommending a standing army of 440,000 troops, the smallest number since World War II. One might ask how this is important to higher education. However, the reduction in active duty forces presents the potential for an increase rate of unique students on American campuses. While it may seem that the wind-down would not be a difficult challenge, colleges are recognizing that returning veterans represent more than simply an increase in numbers for

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institutions of higher learning; they also present unique challenges for instructors and administrators. Therefore, institutions of higher learning are striving to serve the aspirations of these new students in effective ways so that they may return to civilian society to discover and begin productive careers. To accomplish this goal, institutions of higher learning recognize that they are dealing with a kind of student whose needs and demands for education or training are quite different from previous GI Bill students. This recognition requires adjustments in the classroom and on campus.

Nonetheless, the unique challenges of veterans transitioning from military service to a college environment are often not what faculty and staff at colleges are prepared for. Some of the stresses and adjustments of veteran students are readily observable and even typical for many new students; however, others may be more specific, subtle, and complex. If colleges seek to educate returning veterans, they must first learn about the special needs such students present and develop ways to accommodate them within classrooms and on campuses with appropriate support services, effective instructional strategies, and targeted academic and social advisement.

In an interview, Tom Tarantino of the Iraq and Afghanistan Veterans of America stated, "If colleges are not prepared to help transition soldiers from combat, you run the risk of losing an entire generation. The GI Bill isn't a 'thank-you for your service" ("Veterans Returning," n.d., para. 5). Tarantino echoes the beliefs of many military veterans, when he goes on to state:

> [the GI Bill] is really a readjustment benefit. It is giving soldiers the opportunity to do something constructive for their minds and their bodies that gives them a mission and allows them to move forward in life. It's a backstop so you are not walking right off the plane from combat into the civilian world. It was designed to be a soft landing. ("Veterans Returning," n.d., para. 5)

Based on the thoughts of Tarantino (as cited in "Veterans Returning," n.d.), in order to help reintegrate returning veterans into their classes, it is important for professors to understand the transition of veteran students occurs in three levels simultaneously, adjustment to civilian life in general, adapting socially and academically to the universe of college level thinking and working, and the adjustment to classroom-based learning skills and interactions.

Transitioning to Civilian Life

The initial level of transition is challenging because the United States spends immense amounts of money and time preparing service members to be a part of a military force and training them for combat. Changing a raw recruit into a part of this highly specialized segment of society can be long and arduous and is always expensive (Cordesman & Burke, 2012). The US Government spares little cost preparing young men and women to be part of the American fighting forces. Although the advertisements often refer to the Army as *an Army of One*, the truth is that new members of the Army, the biggest branch of the military, or any of the military services, must learn how to become a part of a group, to think like their peers, and to anticipate the needs of their mission. In a nation of individuals where independence from others is often a prized characteristic, this can be a very difficult transition, and once achieved, is a trait or behavior that the military constantly reinforces for automaticity. This is understandable considering the tasks and missions that military forces have and given the fact that failure to adhere to their training can result in death, often on a daily basis.

However, the reintegration of citizens back into their civilian lives, has typically received only a small fraction of the resources committed to their development into soldiers (Cordesman & Burke, 2012). When military personnel

finish their tours of duty and return to their homes, the transition they must navigate may include moving from a feeling of danger to safety, discomfort to comfort, camaraderie to solitude, chaos to order, and lawlessness to lawfulness. For veterans, returning back to the world they may have known before can be just as challenging and frightening as was the transition to being a soldier, only there is often little or no organized support for the return voyage home.

In this sense, service members often look forward eagerly to this time of transition, but it may have no clear individual pathway. As a result, they do not always find the journey is smooth, and coping with it becomes surprisingly difficult. Veterans soon realize that in addition to the total change of environment, there are many personal transitions, some large and some small, from military duty to civilian life. These challenges can make the hope of quickly returning to a civilian lifestyle somewhat unrealistic. They often discover that many things, from surroundings to relationships, have changed in their absence. Veterans may also discover that their priorities have now shifted. For example, they may realize that, as service members, they have developed a different set of values than they had prior to service which can conflict with the views of their families and friends. They may even have a new appearance (which may or may not be positive) or a new physical challenge. When they add the changes associated with taking on a college experience, to this multitude of adjustments, life as a new civilian can gradually or suddenly seem overwhelming, confusing, and/or frustrating for former military personnel. This process can leave veterans questioning where, if anywhere, they belong in this new world (Church, 2009).

Transitioning to Campus Life

A second level of re-integration into civilian life for soldiers is the return to college. At this level, soldiers often find that they have a variety of issues and obstacles to overcome in order to "fit in" with their new society. Five challenges for professors and instructors in higher education present themselves when they begin to work with returning veterans.

First, and perhaps most fundamentally, veterans must create or return to a different identity. No longer can they discover who they are, relative to others, by looking at badges, rank, or insignia. As Sherman (2010) noted, "The transitions are rarely seamless. For many, soldiering is not just a job or a career; it is an identity; it is who they become. Leaving it behind is not easy" (p. 4). In the place of the vocation they previously held, veterans suddenly find themselves as part of what may seem to be an undefined group where status or position is not determined by standardized advancement procedures or evaluations, and where dedication to compatriots rarely, if ever, approaches the level of "brotherhood" that permeates the military environment. As with any major life transition, the support of family, friends and the greater community is a critical component, but the transition to college life requires more because of the nature of the change itself.

This transition is an example of what the futurist, Joel Barker (2008), calls "a complete change of paradigm" (p. 2) a restructuring of their world view requiring veterans to entirely give up their previous assumptions. Understanding paradigms, as a strategy for organizing the world, can help in that effort, but prior knowledge can also limit how we perceive our current circumstances thereby narrowing our ability to change or to adapt. A paradigm shift is precisely what veterans often find so difficult, and yet they know that accepting and adapting to a new one is the first step to making a successful re-entry into the world of learning and work.

Johnson (1998) addresses this same issue by using a modern parable that echoes Barker's assertion that it is human habit and often easier to attempt to interpret a new situation from the relative safety of our old assumptions rather than to accept that the world has changed, and to adapt to new circumstances and form new paradigms. However, colleges sometimes miss this slow and sometimes painful change which must be made by all veterans who wish to return to campus. To assist institutions as they seek to facilitate this transition for returning GI's, there

is support through agencies such as the Veterans Administration (VA), which advise colleges and universities that social support for this process from a variety of resources including formal military-dedicated entities such as Warrior Centers located on campuses across the US, the National Child Traumatic Stress Network, the National Center for PTSD, and the Field Operations Guide for Psychological First Aid (Bymer et al., 2006). All are adept in assisting new military students to make this multi-level transition. But, insofar as the transition is successfully made, the burden, in great proportion, rests on the shoulders of individual veterans who are often anxious or in a hurry to begin the process, yet nervous about the outcome.

Returning veterans often notes that the style of teaching and classroom management used by professors or instructors can make an important difference in this adjustment process as well. The deliberate use of broad-based teaching strategies arising from effective approaches to teaching and learning including many of the concepts included in the Scholarship of Teaching and Learning (SoTL) can provide a number of instructional options that can meet the needs of transitioning soldiers. In the words of Huber and Hutchings (2005), teachers often find "the work of the classroom [becomes] a site for inquiry, asking and answering questions about students' learning in ways that can improve one's own classroom and also advance the larger profession of teaching" (p. 1).

Once the initial social adjustment for veterans is in process, the academic and the social reintegration process can continue in tandem with their academics. Instructors and campus personnel can assist in this complex transition by keeping a few basic concepts and practices in mind which correlate well with several of the five characteristics proposed by Huber and Hutchings (2005).

A second challenge returning veterans often find is relating to or connecting with other traditional college students. For veterans, a principal goal of being part of a college student body is to facilitate their integration or return to civilian life, but due to their relative difference in age and because they have had significantly different experiences, veteran-students may often find traditional college students to be lacking in depth or simply callow. Given their previous experiences, veterans often can have little patience for what may be perceived to be "important" issues of campus life. In fact, returning military personnel have expressed that they felt "different" from the rest of the campus population. This perception of being different can actually increase the feeling of alienation that many veterans experience upon their separation from the military ("Veterans Returning," n.d.). If veterans feel un-connected in this way, it can make learning difficult or stress-related.

Thirdly, military personnel often find procedures on a college campus confusing or illogical ("Veterans Returning," n.d.). Although, this feeling can be experienced by any new student, it can be even more baffling for service members who have for the recent past experienced a

Returning veterans often note that the style of teaching and classroom management used by professors or instructors can make an important difference in this adjustment process...

period of doing things "the Army way" or "the Navy way" which is often highly regimented. Detailed steps are nearly always outlined for every military task, and strict compliance is expected. For these reasons, the "college way" of doing things may seem lax, unclear, or lacking in specificity. In this regard, advisors in colleges have an important role to play in the guidance of returning veterans. They should know that veterans will often, especially at the start of their college careers, require more detailed guidance than other advisees especially with respect to procedural matters. This need for detailed explanations should decrease as time passes and the service members become more acclimated to procedures and campus life in general. However, the assimilation process often does not proceed predictably and uniformly; assistance needs to be pro-active and at the ready. Academic and social advisors need to be intentionally attuned to (often subtle) clues that their veteran-

advisees are experiencing frustration or confusion about college or classroom procedures.

A fourth issue that veteran-students may encounter concerns those service members who are returning from battle zones ("Veterans Returning," n.d.). While the military does provide counseling and transitioning services at the point of separation from the military, even the veterans themselves may not know they are experiencing combat-related stress. It is important to remember that these soldiers are leaving behind a period in their lives where perhaps everything is perceived as a "life or death" experience or decision. Campus life is generally not such an environment, of course, but disposing of the reactions and responses that combat-experienced veterans have developed over multiple battle-zone experiences takes time. Faculty and staff members should be aware that for months after they return home, some veteran-students retain a negative association with certain sounds, movements, or even smells. These can evoke discomfort or raise their level of concern within the learning environment, thus making learning difficult at best. A helpful solution is to work with the campus veteran support agency or Warrior Center to determine how instructors and staff can quickly recognize changes in affect or behavior that might indicate veteran-students are experiencing discomfort which can lead to poor classroom performance. Instructors can easily avoid or prevent what they may see as simple behaviors such as clicking pens, un-attended backpacks in the classroom, dropping books on the floor, or shouting, among others. Simple decisions such as these can help veterans develop a new sense of safety and ease on campus.

While very few members of a typical teaching faculty are properly trained or prepared to deal with significant diagnosed conditions such as PTSD, all faculty members should make themselves aware of the symptoms of post-traumatic stress and related conditions. Professional development activities should be offered to faculty to increase awareness of this serious and often under-reported condition. Recommended or required overviews of this condition may be arranged through the personnel office on campus. Self-guided classes much like those used to train faculty in other human resource issues may be effective, and professors may collaborate with other campus support agencies to develop assistance plans to benefit returning service members as they adapt to classrooms.

It should also be noted that many returning service members, although not diagnosed with PTSD, are nevertheless dealing with perhaps more common, or even mundane but very real stress that comes from resuming a previous role left behind prior to an unaccompanied assignment. Veterans often discover that they must immediately reassume their role of parent, spouse, and/or family caretaker upon returning from deployment, and even though they may be happily taking on these roles, the normal stress associated with them is magnified through the lens of combat zone experiences. Similarly, they may not have performed these duties for months, but returning service members must now pick up where they were before their departure, but they can find that, as Bob Dylan once said, "things have changed" in a variety of ways during the absence. It is possible new intra-relationship challenges have developed during the deployment. There is also the possibility that in spite of the support family members have maintained for their veterans during their absence, there may exist some latent resentment that can surface later. Also, family members, having fulfilled the role(s) of absent veterans while they were in combat, may now be reluctant to relinquish those responsibilities even though the service member is willing and desirous of resuming those tasks and roles. All of these scenarios may increase the already high level of stress that a service member is experiencing.

Finally, service members who are transitioning with new disabilities are a special category. In addition to their new specific and unique physical challenges, these service members may well be experiencing all of the previously mentioned challenges. Instructors, advisors, and professors will require significant training and preparation to successfully teach or advise veterans such as these. While the specific details of this training is beyond the scope of this discussion, it is important

for instructors and professors to seek proper assistance from agencies such as those mentioned earlier and to plan well in advance if possible for working with soldiers such as these.

The following are some examples of the challenge of "fitting in" on campus and in the classroom as described by Huber and Hutchings (2005) and some examples of ways to facilitate the transition whether faculty members have veteran students in their classrooms, simply meet them crossing campus.

- Know that veterans are not all alike and their transitions, while having commonalities, may vary in pace and difficulty. Patience on the part of instructors will be important in facilitating the integration to campus life or the classroom. It should be noted, that professors' desire to exhibit the patience needed with returning soldiers, can be constrained by the requirements of on-line coursework or other exigencies that impact and limit the degree of flexibility they may control. Instructors, who have a returning veteran in their classes, can (and should) consult with Warrior Center staff members to determine if a specific course, whether on-line or face to face, is appropriate at the stage of any individual veteran's reintegration process. In this way, instructors and veterans support staff may collaboratively develop strategies for working with individual students. Point 5: "The work of teaching occurs in an almost infinite set of contexts – defined by discipline, student demographics, institutional types, pedagogical approach, curricular goals…" (Huber & Hutchings, 2005, p. 35).
- Take time to get to know the returning military student. Find out how he/she learns best. Like all students each veteran will have a preference in this area. Two easily used strategies for this is to do an informal work analysis and/or to use a Gardner questionnaire. The informal analysis will furnish the instructor with a real-time example of a veteran's written work. These data can be an excellent pre-assessment barometer of the student's comfort level in the class, knowledge of prior or fundamental concepts, and degree of confidence in written expression. A more formal assessment such as the Walter McKinzie Multiple Intelligences (M.I.) Inventory based on the pioneering work by Dr. Howard Gardner, can give an instructor an even more detailed profile of the veteran's learning preferences. To avoid drawing unneeded attention to a veteran student in one's class, it may be advisable to administer the inventory to all students in the class. This can be valuable data to have about any students. A third approach is to begin to develop a comfortable informal dialogue with veteran students that are both non-judgmental and yet compassionate. Finally, based on all the data collected, professors should volunteer assistance to the veteran student if possible.
- Remember that instructors can provide many kinds of social assistance including emotional support, reassurance of self-worth, advice and information, and physical or material assistance. Point 1: "It means viewing the work of the classroom as asking questions about student learning" (Huber & Hutchings, 2005, p. 1). This reassurance may take the form of informal updates about student performance, recommendations of study strategies or skills, referrals for additional assistance provided by the institution, and/or specific positive comments.
- Do not lower standards, yet do provide individualization. In personal experiences and based on multiple conversations with returning veterans, the authors find that veterans generally do not want to think they are receiving a lesser education, and yet many admit they may need additional time or other accommodations to complete work

especially if they are beginning the transition to civilian life (Ackerman, DiRamio, & Mitchell, 2009).

- Provide information, not prescriptions. Often the veteran-student knows very well what he/she needs to do to adapt or change. So, it is more helpful when instructors respond to questions as needed and ask specific questions about how things "are going". It is better to avoid general or vague questions such as "Are you doing OK?" because the answers seem usually be positive even if things are in fact not going well. And, the veteran may interpret the question as either meaningless pleasantry or possibly uncaring which does nothing to assist them in their efforts to re-integrate into civilian society (Ackerman et al., 2009). A professor may do far more good by giving one or two specific positive comments about a veteran's recent work or participation in class or his/her functioning on campus.
- As Rose (2010) suggests, the transition process is complex and has many facets, but the key idea is to treat a complex educational issue in a comprehensive and integrated way. Research by Ingala, Softas-Nall, and Peters (2013) indicates that college adjustment, never an easy transition for students, is especially complex for non-traditional students such as veterans. They also report that measuring and quantifying progress on this challenge can be very difficult. Assessment of this transition becomes even more problematic when one adds in the variety of possible intervening variables including family responsibilities, mental health, and financial burdens that often accompany re-entry into civilian life.

Transitioning to the Classroom

As returning veterans begin to make the transition to civilian and campus life, the issue becomes a question of how do instructors in the classroom provide them with the best opportunity for academic success. The authors believe the answer lies in a multi-pronged approach that includes concepts based in the Scholarship of Teaching and Learning (SoTL). This model along with other supports can provide good answers to the teaching challenge that confronts college level instructors working with veteran students.

First, using the SoTL model can be central to the overall success of veteran students. There are five specific principles of the SoTL model that are especially noteworthy for instructors in general and may readily apply to the instruction of veteran students in higher education. These principles include: 1. Inquiry into student learning; 2. Teaching grounded in context; 3. Sound methodology; 4. Work conducted in partnership with students; and 5. Work that is appropriately public (Huber & Hutchings, 2013). Huber and Hutchings (2013), as well as others, have addressed the SoTL model in great detail, so it is not the purpose of this article to reiterate what others have described. Therefore it is useful and beneficial to begin with an understanding of this intriguing area of research. In addition, instructors' work with returning veterans can benefit from several other helpful research-based strategies working in concert with SoTL, to assist them in the effective instruction of veteran students. Regarding SoTL, work by Pat Hutchings, Mary Taylor Huber, and Anthony Ciccone, especially their book, *Scholarship of Teaching and Learning Reconsidered* (2011) is a good place to start to understand the relationship between the scholarly work of the professoriate and effective strategic teaching in higher learning.

Secondly, in informal conversations with returning soldiers, veteran students often express impatience with instruction that they find difficult to follow or that, to them, seems unclear in its direction. Conversations with veteran students on campus reveal that, among the many concerns expressed individually, they seem to prefer certain specific kinds of instruction over others. For example, they

often seek opportunities to collaborate with others. An initial pilot survey of returning veterans has yielded support for this observation as well.

While Huber and Hutchings' (2013) first principle which proposes a careful inquiry into how all students prefer to learn, the results of the pilot survey would indicate that it is also worthwhile to pay special attention to the learning preferences of veterans in a class. An example of a brief survey that can facilitate gathering this data is included as an attachment and may be used as is or modified to fit the needs of individual instructors. The survey was designed with the four primary learning styles in mind (auditory, visual, kinesthetic, and intuitive or universal) and is based on the early work done in this area by Carbo (1986) and Fleming (2001). Carbo's (1986) initial work on reading styles along with the research done by Fleming (2001) is easily accessible and understandable by any instructor and aligns easily with principles of SoTL. Their work is easily used in the classroom as a diagnostic tool by instructors who may not have a background in elementary or secondary education. The broad categories used by Fleming serve as effective initial organizers for selecting strategies for learners. He also provides strategies and activities that engage students in each modality or learning style. The self-select questions on the survey allow students to identify a preference for one of the four styles of retaining information as the questions become increasingly more specific. Thus, the instructor can easily assess the results using a quick quantification or by looking at the questions in a more qualitative manner.

Third, Warrior Centers are service offices that provide support for veterans on local campuses, but which may not be available at all institutions. Also, Veterans Administration offices that are typically found on most campuses can also provide assistance for a variety of veteran-related needs including learning preference assistance. The efforts of these agencies have found success in supporting veterans' goals to remain in school and to complete their programs. Kathy Snead, director of Service Members Opportunity Colleges, a government-funded organization that helps veterans complete their degrees believes that a campus veteran's organization or office helps service members feel more engaged in student life. She agrees with Lawrence Braue who was recently referenced in an article by Suzanne Shafer, "indicating that institutions should, "…set up a one-stop shop, a center populated with people who [understand] the complex medical and financial benefit systems that they must navigate … a full service veterans center." (Schafer, 2014, para. 22). A successful veterans' center should include academic advising, resources for counseling, financial aid, tutoring, mentoring, and other academic and social needs. If possible, a veterans' center can create a space for returning soldiers to meet, socialize and study. Colleges and universities should offer a customized "Veterans Orientation" for incoming student veterans at the beginning of each semester and establish learning communities with a service component geared toward helping families of veterans (Schafer, 2014).

Fourth, in collaboration with the VA or a veterans' center, a college should develop a campus-wide training response to PTSD. Although not confined to military personnel, this condition has come to our national collective attention since 2001 (Church, 2009). It can be beneficial to all college professionals who work with veterans to have access to trained faculty and staff who recognize the symptoms of PTSD and can refer such students to a designated liaison on campus. Several counseling representatives should be trained to deal with complex or deeper issues and offer ways for professors and advisors about how and where to refer such cases. To further build awareness, centers should provide for regular and continuing PTSD professional development training (McDonough, 2011).

In this connection, Operation Educate the Educator, a comprehensive federal program begun through the Joining Forces initiative started by First Lady Michelle Obama and Dr. Jill Biden has opened up opportunities for educators. This effort aims to educate, challenge, and spark action from all sectors of society to ensure veterans and military families have the recognition and support they have earned. More than one hundred US colleges and universities have signed on to the

Joining Forces commitment that helps prepare educators to lead classrooms and develop school cultures that are responsive to the social, emotional and academic needs of military families.

A fifth classroom strategy recommended for instructors, who are working with returning service members, is to harness the power of collaborative activities. Military culture constantly reinforces the importance of "working as a team" in nearly all endeavors. Veterans who have been trained in this culture will not easily relinquish it and may find an emphasis on individual effort and work products to be confusing or difficult. In fact instructors may even find individual work submitted by veterans to be unfinished or otherwise inadequate (McDonough, 2011). McDonough (2011) believes that even if a soldier has TBI (Traumatic Brain Injury) incomplete or poorly done work does not give us a true or complete picture of the veteran student's skill level or knowledge which can lead us to make an inaccurate judgment of accomplishment or mastery of concepts. Collaborative activities such as Cooperative Learning activities can be effective for any students since it addresses higher level thinking at the comprehension, application, and/or analysis levels. Research by Bloom, Engelhart, Furst, Hill, and Krathwohl (1956) shows that learning requiring higher level thought processes has a greater chance of being long lasting. Therefore, instruction that requires veteran students to actively engage in the learning process and that encourages students to work together to achieve a common goal may have the best chances for returning service members to achieve academic success. In many cases, service members may already feel isolated due to their own specific and unique experiences. But, after having been in a group-focused environment, veterans often welcome a group-based hands-on learning experience in their college classroom. Collaboration may have a better chance of engaging veteran-students while providing instructors with more accurate data on which to base evaluations and future lessons. It can also provide veteran students with a better insight into the learning preferences of their classmates and a new appreciation for their academic contributions.

> **A fifth classroom strategy recommended for instructors, who are working with returning service members, is to harness the power of collaborative activities.**

Supporting this concept, Gagne (1962) who served as a consultant to the Pentagon from 1958 to 1961 determined that a specific model of instruction that includes a three-step instructional plan that is both simple and effective works best in military settings. This three-part design is still in use in military training programs today and includes: 1. providing instruction on the set of component tasks that build toward a final more complex task; 2. ensuring that each component task is mastered; and 3. sequencing the component tasks to ensure transfer to the final task. Gagne recommends that there be a clear, dependable, and predictable design used to develop all lessons so that students can focus on the content of the lesson without trying to discern the order or logic of the lesson which again connects to Huber and Hutchings (2013) principles. Careful, consistent, design for each lesson can assist veterans to make the transition to college level learning. Many researchers in education from Dr. Madeline Hunter at UCLA in the 1940s to Marzano (2003) in current times have said that planning of this type will ultimately benefit all students' learning, but providing the connection to previous military models can be of special help for professors wishing to effectively reach and instruct returning veterans in their classrooms.

Finally, a last strategy for assisting veteran service members is the coaching/advising approach advocated by Hallowell and Ratey (1994). Even though their original intent was to address the needs of students who have difficulty generally focusing on school work and other tasks, Hallowell and Ratey (1994), both medical doctors, advocate working with veterans individually. In a tutorial relationship professors and advisors should endeavor to isolate where learning stumbling blocks exist, work through those by breaking them down into smaller tasks, and coaching the student in the same ways as sports coaches. Their book provides a number of effective practical strategies for university level instructors to

use in a tutorial relationship with individual students, especially those who may not be inclined to participate verbally in class.

In summary, the unique nature and needs of returning veterans and active duty military personnel present a new challenge for colleges and universities. As the American Council on Education-ACE report (2010) notes, recognizing the need to include more flexibility in our teaching and assessment of student needs not only benefits student veterans, but also other students who may profit from having the same flexibility extended to them. However, understanding, compassion, and planning for veterans' transitions must be thoughtful and intentional, as these students, while perhaps not traditional, present a rich opportunity to engage the college classroom. The use of research-based instructional strategies targeted for optimal learning for veteran students can make the experience better for students and instructors alike. Perhaps, of greater importance is the opportunity to support the student veterans in achieving their goals of remaining in school and earning their degrees.

References

Ackerman, D., DiRamio, D., & Mitchell, R. (2009). Transitions: Combat veterans as college students. *New Directions for Student Services*, *2009*(126), 5-14. Retrieved from http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1536-0695

American Council on Education-ACE. (2010). *Accommodating student veterans with traumatic brain injury and post-traumatic stress disorder: Tips for campus and faculty*. Retrieved from http://www.acenet.edu/news-room/Documents/Accommodating-Student-Veterans-with-Traumatic-Brain-Injury-and-Post-Traumatic-Stress-Disorder.pdf

Barker, J. (2008). *Putting our differences to work: The fastest way to innovation, leadership, and high performance*. San Francisco, CA: Berrett-Koehler.

Barker, J. (1996). The Mondragon model: A new pathway for the twenty-first century. In F. Hesselbein, M. Goldsmith, & R. Beckhard (Eds.), *The organization of the future* (pp.109-118). San Francisco, CA: Jossey-Bass.

Bloom, B. S. (Ed.), Engelhart, M. D., Furst, E. J., Hill, W. H., & Krathwohl, D. R. (1956). *Taxonomy of educational objectives: The classification of educational goals. Handbook 1: Cognitive domain.* New York, NY: David McKay.

Bymer, M., Jacobs, A., Layne, C., Pynoos, R. Ruzedk, J., & Steinberg, A. (2006). *Psychological first aid: Field operations guide* (2nd ed.). Washington, DC: Department of Veterans Affairs.

Carbo, M., Dunn, R., & Dunn, K. (1986). *Teaching students to read through individual reading styles*. New York, NY: Allyn & Bacon.

Church, D. (2009). The treatment of combat trauma in veterans using EFT (emotional freedom techniques): A pilot protocol. *Traumatology*, *16*, 55-65. doi:10.1177/1534765609347549

Cordesman, A. H., & Burke, A. A. (2012). The U.S. cost of the Afghan War: FY2002-FY2013: Cost in military operating expenditures and aid and prospects for "transition." Retrieved from CSIS: Center for Strategic & International Studies website: http://csis.org/publication/us-cost-afghan-war-fy2002-fy2013

Cozza, S. J. (2015). Meeting the intervention needs of military children and families. *Journal of the American Academy of Child and Adolescent Psychiatry, 54*(4), 247-248. doi: 10.1016/j.jaacap.2015.01.012

Flemming, N. (2001). *VARK a guide to learning styles*. Retrieved from http://www.vark-learn.com/english/page.asp?p=categories

Gagne, R. (1962). Military training and principles of learning. *American Psychologist, 17*, 263-267. doi: 10.1037/h0048613

Hallowell, E. M., & Ratey, J. J. (1994). *Driven to distraction*. New York, NY: Pantheon Books.

Huber, M. T., & Hutchings, P. (2005). *The advancement of learning: Building the teaching commons.* San Francisco, CA: Jossey-Bass.

Huber, M. T., & Hutchings, P. (2013). *Connected science: Strategies for integrative learning in college*. T. A. Ferrett, D. R. Geelan, W. M. Schlegel, & J. L Stewart (Eds). Bloomington, IN: Indiana University Press.

Hutchings, P., Huber, M. T., & Ciccone, A. (2011). *The scholarship of teaching and learning reconsidered: Institutional integration and impact*. Hoboken, NJ: John Wiley & Sons, Inc.

Ingala, A., Softas-Nall, L., & Peters, A. (2013). The role of social support in veteran's college adjustment. *International Journal of Humanities and Social Science*, *3*(11), 14-21. Retrieved from http://www.ijhssnet.com/

Johnson, S. (1998). *Who stole my cheese?* New York, NY: Penguin Group.

Marzano, R. J. (2003). *What works in schools: Translating research into action*. Alexandria, VA: ASCD.

Marzano, R. J., & Heflebower, T. (2011). *Teaching & assessing 21st century skills*. Bloomington, IN: Marzano Research Laboratory.

McDonough, V. T. (2013, April 12). *Helping veterans succeed in college*. Retrieved April 7, 2015 from http://www.brainlinemilitary.org

Resources for returning war veterans. (n.d.). Retrieved from James Madison University, Resources & Self-Help website: https://www.jmu.edu/counselingctr/resources/for-veterans.shtml

Rose, M. (2010, March 19). *Soldiers in the classroom*. Retrieved from *Inside Higher Ed*, Views website: https://www.insidehighered.com/views/2010/03/19/rose

Schafer, S. M. (2014, April 4). Many returning vets bound for college. *Washington Times*. Retrieved from http://www.washingtontimes.com/news/2014/apr/4/many-returning-military-vets-bound-for-college/?page=all s

Sherman, N. (2010). *The untold war: Inside the hearts, minds, and souls of soldiers*. New York, NY. W.W. Norton & Company.

Veterans returning to college face unique challenges. (n.d.). Retrieved from Military.com, Veteran Jobs, Career Advice, Military Transition Archive website: http://www.military.com/veteran-jobs/career-advice/military-transition/veterans-in-college-face-challenges.html

Appendix

Data Gathering Tools

Learning Styles Questionnaire

Select the level at which you agree or disagree with each of the following statements about how you prefer to learn.

		Not like me at all	Not like me	Like me	Very much like me
1.	Given a choice I tend to draw diagrams or construct a model to help me learn something.	1	2	3	4
2.	In class, I usually remember what I see best.	1	2	3	4
3.	Explanations I hear stick with me better than things I read.	1	2	3	4
4.	Often I cannot really explain how I've learned something.	1	2	3	4
5.	I take a lot of notes in class, but afterwards, I do not always carefully review or look them over to prepare for a test.	1	2	3	4
6.	Charts or graphs help me understand information better than explanations.	1	2	3	4
7.	In learning situations, I prefer lectures or spoken presentations.	1	2	3	4
8.	When it comes to how a concept is presented, I do not really have a preference for one style or another.	1	2	3	4
9.	To show my mastery of a concept, I would prefer to build an example using the principles I have learned than to discuss them.	1	2	3	4
10.	When I recall things I have learned, I often see "pictures in my mind" rather than "hearing voices."	1	2	3	4
11.	I rarely feel the need to take notes as I listen to a class lecture or discussion.	1	2	3	4
12.	When it comes to remembering concepts or ideas, things often just seem to "pop into my mind" and then I know them.	1	2	3	4
13.	If I want to remember something, I really have to "do it".	1	2	3	4
14.	Pictures and photographs help me to understand or remember ideas or concepts.	1	2	3	4
15.	When I think of people, I often hear their voices in my mind.	1	2	3	4
16.	Pictures and verbal information work about equally well to help me remember things.	1	2	3	4

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An Investigation into Student Engagement in Higher Education Classrooms

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This article reports on a one-year research project that used peer coaching and collaboration between two reading professors to study the effects of collaborative classroom activities on student engagement. In order to address professors' concerns about student participation, two undergraduate reading-methods classes were revised through the inclusion of more collaborative learning activities. Classroom observations were conducted to take notes on both pedagogical methods and student response to these methods. Students were also asked to self-assess their engagement in behavioral, cognitive, and affective domains. The results of this research were then used to revise pedagogical techniques in these and other classes.

"Are there any questions?" "What do you think about this?" These are phrases commonly heard in many college classrooms—unfortunately, they are often met with silence. Student passivity in learning situations is a problem that plagues university professors and causes them to search for better ways to help students become more active participants and learners. Suggestions for ways to encourage this active participation are plentiful, but which are most productive? This study examined student engagement in two undergraduate reading methods courses. The focus was on the use of "teaching techniques that allow for all students to demonstrate, at the same time, active participation and cognitive engagement in the topic being studied" (Himmele & Himmele, 2011, p. 7). We began with the following question: What are effective methods for enhancing student engagement in the higher education classroom?

Review

Student engagement and learning are issues that have become nationally important in the 21st Century. Wieman and Perkins (2005) examined the relationship between traditional instruction and student learning and suggested better approaches for teaching physics such as avoiding cognitive overload, using technology, and engaging students in well-designed computer simulations. Petress (2006) pointed out that learning was enhanced when students were active rather than passive. Beran and Violato (2009), David (2004), Freeman, Anderman, and Jensen (2007), Rocca (2008/2009), and Chiu (2009) all examined factors such as classroom atmosphere and faculty-student interactions that influenced student engagement. In November 2011, both *Inside Higher Ed* and *The Chronicle of Higher Education* presented articles dealing with the importance of student engagement. In response to these concerns as well as experiential concerns on the same topic, educators in higher education settings began to more closely investigate specific strategies that would motivate students to become better learners. Goldberg and Ingram (2011) investigated active learning techniques in lower-division biology classes and found that student engagement was improved when mini-lectures were paired with active-learning activities such as development of concept maps, problem-solving exercises, and a

What are effective methods for enhancing student engagement in the higher education classroom?

categorization grid. Auman (2011) designed a simulation-based pedagogy for her Educational Psychology class and found that game simulations resulted in increased engagement on the part of both students and herself. AlKandari's (2012) investigation into student perceptions about classroom discussions found that students positively acknowledged that discussions, debates, group work, and presentations were designed to enhance their learning and communication and resulted in increased engagement and motivation to learn.

In their book, Himmele and Himmele (2011) presented 37 'Classroom Ready Total Participation Techniques' (TPTs) designed to engage and motivate learners in K-12 settings. These techniques were also used in their own university classrooms at Millersville University. Their self-stated goal was to avoid the 'stand and deliver' approach commonly used in college classrooms, which would result in turning students into "listening objects" (Freire, 2000, p.7). Instead, they promoted the use of techniques that engaged students at higher levels of thinking. This philosophy was embedded into our own study as several TPTs were introduced throughout each semester.

Method

Participants

The purpose of this study was to determine which teaching techniques best-enhanced student participation and engagement in reading methods classrooms. This mixed-methods study included both quantitative and qualitative analysis of data collected over the course of two semesters during the 2012-2013 school year. The sample of convenience was comprised of 55 students who were enrolled in two reading methods courses required for elementary teacher certification.

Informed subjects gave their consent to use solicited feedback and observation data related to their participation in class. At the end of each semester students were asked to complete a survey concerning their opinions related to collaborative activities.

Research Design

The process of peer coaching was used as a means of providing support and feedback to the researchers involved (Pellicer & Anderson, 1995). Researchers would visit each other's classrooms and take notes and then meet weekly to inform one another about observed student engagement levels during class activities. This analysis was based on the use of Himmele and Himmele's (2011) *TPT Cognitive Engagement Model and Quadrant Analysis* (Figure 1).

To control for bias and cross-validate results, a graduate research assistant was hired and trained to observe both classes and to take detailed notes based on the *TPT Cognitive Engagement Model and Quadrant Analysis.* These notes included the amount of time

TPT Cognitive Engagement Model and Quadrant Analysis
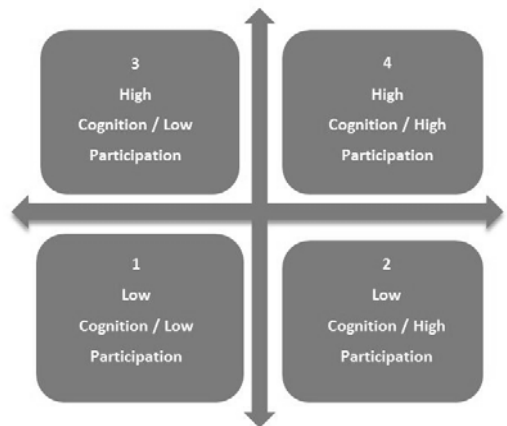
Figure 1. *TPT Cognitive Engagement Model*

devoted in class to instructional strategies as well as analysis to determine levels of cognition and participation. The independent observer's notes were combined with the researchers' data for analysis of the percentage of time devoted to each quadrant (see Figures 2 and 3).

A variety of student engagement techniques were selected to use during class sessions. Techniques were selected based on an analysis of those that would best promote higher engagement and cognition (Finkel, 2000; Himmele & Himmele, 2011; Yokomoto, & Ware, 1997). See Appendix A for a description of these activities.

Surveys were administered at the end of each semester. The survey consisted of seven questions that students responded to on a 5-point Likert scale (1: *always*; 2: *usually*; 3: *sometimes*; 4: *seldom*; and 5: *never*) and three additional questions that were open-ended. These surveys included questions that focused on engagement in behavioral, cognitive, and affective domains. According to Fredericks, Blumenfeld, and Paris (2004), there are three types of classroom-based engagement: behavioral, cognitive, and affective. Behavioral refers to 'on-task' behaviors. Cognitive engagement involves the ability to achieve higher-level understanding of materials focusing on Bloom's taxonomy levels of analysis, evaluation, and creativity. Affective engagement measures the student's attitude towards the subject matter as well as interest in the topic. These areas can be measured through teacher observations as well as student self-assessments.

Results

Student Engagement Ratings

The peer coaching process was used to inform one another about observed student engagement levels during class activities. This analysis was based on the use of Himmele and Himmele's (2011) *TPT Cognitive Engagement Model and Quadrant Analysis*. A research assistant also observed each class in order to control for bias. Observers (the peer coach and the research assistant) recorded the amount of instructional time that the teacher spent in each quadrant. The results indicate the total percentage of instructional time for each quadrant over four, ninety-minute class periods (see Figures 2 & 3).

Cognition Engagement Model and Quadrant Analysis Results for Class A

Figure 2. *Quadrant Analysis Results for Class A*

Cognitive Engagement Model and Quadrant Analysis Results for Class B
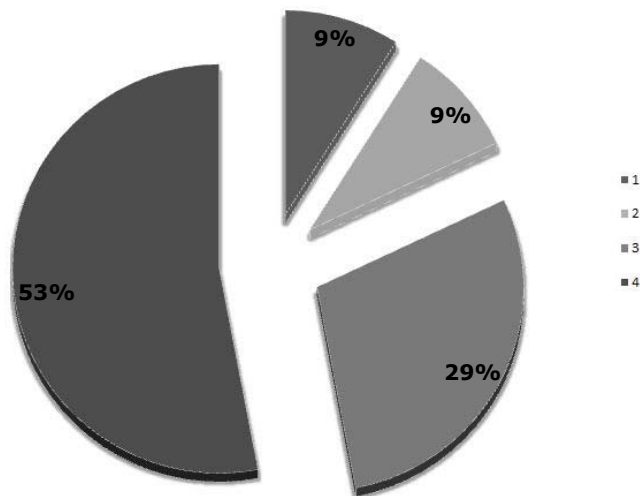
Figure 3. *Quadrant Analysis Results for Class B*

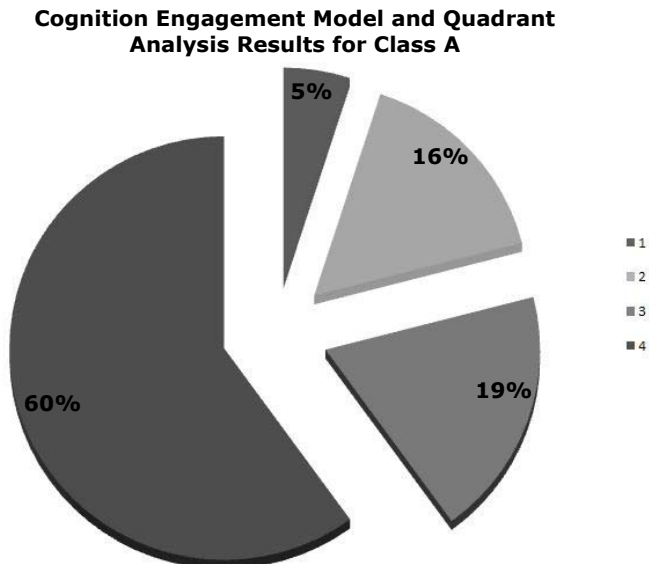Class A analysis found that students were engaged in quadrants three and four for 75% of the time. Class B was engaged in quadrants three and four 82% of the time. Quadrant three focuses on high cognition and low participation. When class time was spent in this quadrant, activities were designed for high cognition, but not all students would be observed as actively participating. Quadrant four requires high cognition and also high participation. Class time was comprised of collaborative activities that required students to actively participate in pairs and/or small groups to apply what they had learned through discussion and in writing.

Analysis of classroom events indicated that quadrant three activities included group quizzes and similes. These activities received the rating of three because observers noted that not all students participated actively. During the group quiz activity, it was observed that a self-appointed leader would take over and dominate the group. Students who had not read the assignment upon which the quiz was based would assume the role of scribe and would then allow other students in the group to provide the needed answers.

Creating similes requires analytical thinking about a topic as students are asked to make comparisons between both terms. (e.g., 'A literacy coach is like a lighthouse'). Again, however, it was observed that some students would be more active during this activity while others assumed the role of an observer. Only when each individual was asked to independently create their own simile and then to share it with the class and explain its significance could quadrant four be achieved.

Quadrant four activities were identified as the Debate Team Carousel, Conceptual Workshop, Chalkboard Splash, and Three-Sentence Wrap-up. Debate Team Carousel and the Conceptual Workshop were both extremely successful in terms of achieving full participation and higher order thinking. In Debate Team Carousel, students were provided with a form (see Appendix B) that allowed them to work in a small group and individually respond to a specific prompt.

All students were actively engaged during this activity because they were individually responsible for a written response.

The prompt was one that required both judgmental and evaluative skills. Each student recorded both his/her opinion and the rationale for that opinion. Then papers were passed to the next person in the group who responded by providing a

supporting and then an opposing opinion. All students were actively engaged during this activity because they were individually responsible for a written response. The discussion that followed was lively as students explained their rationales.

The Conceptual Workshop was similar in terms of requiring all students to provide written responses. See Appendix B for an example of a workshop developed to help students learn about dyslexia. In this format, students were provided a form with written questions that required initial research, synthesis, and evaluation. They were given ample time to find and discuss their response. Formerly, when dyslexia was initially taught, it was done so through teacher lecture and a PowerPoint. Testing results on the topic at the end of previous semesters were disappointing. It seemed that little was remembered. At the end of the semester in which the Conceptual Workshop was used, 95% of the students were able to answer questions on this topic correctly.

The Chalkboard Splash activity required students to respond individually to questions requiring the skills of analysis, synthesis, and evaluation. After the instructor posed a question, students would write their responses and then copy what they had written on the board. This activity resulted in spirited discussions as students read one another's responses and evaluated them for similarities, differences and surprises.

The Three-Sentence Wrap-up, although not a new concept, was found to be not only difficult for students, but also very informative for us as instructors. It is only easy to summarize what the key points of a lesson are when one truly understands that lesson. Trying to limit an explanation requires true analysis and synthesis of the material that was presented. This activity clearly showed us who understood and who was having difficulty with major concepts that were important in each classroom.

In conclusion, both professors had similar levels of engagement for both quadrants three and four. This, we believe, was due to the fact that extensive dialogue occurred on the topic of using activities that would contribute to participation on these levels. Using peer-coaching techniques was a useful way of analyzing engagement accurately. At times, we would tend to misread our own class, believing that all students were fully engaged and learning. The independent observer and peer coach would have hard evidence that this belief was not actually true. Written notes taken during observations would indicate whether or not all students were actually engaged in the task that had been presented.

Student Surveys

The analysis of the survey questions (see Table 1) indicated similar results for both classes. Responses of either a one or a two on the Likert scale were interpreted as being positive. Percentages reported denote the percent of students who responded positively to each question.

Table 1

Student Survey Results

Question	Class A	Class B	Engagement Type
1. Collaborative grouping/activities helped me to understand the content.	84%	80%	Cognitive
2. Collaborative grouping/activities made me want to participate more.	74%	60%	Affective
3. I took careful notes during class.	74%	60%	Behavioral
4. I connected new learning to information I already knew.	95%	90%	Cognitive

5. I identified key information from reading assignments.	79%	80%	Cognitive
6. I asked questions in class.	63%	70%	Behavioral
7. I contributed to class discussions.	79%	80%	Behavioral
N = 55			

Open-Ended Questions

Question	Class A	Class B	Engagement Type
8. Describe additional information about how collaborative activities helped or did not help your learning.	84% Positive	70% Positive	Affective
9. What do you think motivates you to learn content materials from class the most?	58% Internal 42% Pedagogy	40% Internal 60% Pedagogy	Affective
10. What do you think gets in the way of your true learning?	Life	Life	Affective
N = 55			

The researchers categorized questions one, four, and five as those that measured cognitive levels of engagement. Eighty-four percent of the students in Class A responded positively to question 1 while Class B's responses were 80% indicating that students found that collaborative activities helped them to understand the content. For question four which asked if students connected new learning to previous learning, 95% of the students in Class A and 90% of the students in Class B responded positively. Question five asking if students identified key information from reading assignments was also responded to very similarly with 79% positive responses in Class A and 80% in Class B.

Questions three, six, and seven were categorized as questions that measured behavioral levels of engagement. Question three asked if students took careful notes during class. In Class A, 74% of the students responded positively while in Class B, only 60% responded positively. (This discrepancy was later found to be due to a difference in class requirements—Class A required students to take notes). Questions six and seven targeted class participation. Question six asked if students asked questions during class. Sixty-three percent responded positively in Class A while 70% responded positively in Class B. Question 7 asked if students contributed to class discussions and 79% and 80% of the students in Class A and B respectively responded positively.

For affective levels of engagement, Question two asked if collaborative grouping activities encouraged the student to participate more in class. Seventy-four percent of the students in Class A responded positively, and 60% responded positively in Class B.

Three open-ended questions were also asked on the survey. The first question was – *describe additional information about how collaborative activities helped or did not help your learning*. Eighty-four percent of the answers in Class A were positive and 70% in Class B were positive. Typical positive and negative comments to this question can be seen in Table 2.

Table 2

Student Comments to Question 8

Positive Comments	Negative Comments
• I benefited greatly from the group work. I was able to get others opinions and clarification if I needed to • Working in small groups helped me garner ideas, share, and bounce ideas off of one another • The collaborative activities seemed to be more engaging and we could bounce ideas and thoughts off of each other to come up with the best answer.	• Collaborative activities did not help because other people answered the questions for me • I often felt that group work was just busy work – we had already covered the material so there was no need to do group work too • It helps make it interesting, but the same method over and over can get boring.

The second question was – *what do you think motivates you to learn content materials from class the most?* Typical responses included statements such as:

• clear expectations – engaging class activities and instructor as a model for future teachers
• talking with others and reviewing the material through various class group activities
• the group collaborative work

Responses were then divided into two major categories—internal motivation and those that responded more to pedagogy. Some responses expressed a strong desire to learn and do well in the student's chosen career. Others felt more motivated by the instructor and the methods of instruction. In Class A, 58% were categorized as being internally motivated and 42% were categorized as being motived by the teacher. In Class B, 40% were motivated intrinsically and sixty percent were motived by the teacher.

The last question was – *what do you think gets in the way of your true learning?* Most responses were framed around personal issues like time, home life, and too many classes. A few responses however, confirmed the need for collaborative activities and were usually stated as the need for more 'learning by doing' opportunities.

Discussion

Alison King (1993) first referred to the college professor as the "sage on the stage" (p.30)—the central figure who lectures while students take notes. Morrison (2014) notes that this role has changed as "the teacher has changed in a significant and positive way: no longer a 'sage on the stage', the teacher now functions as more of a 'guide on the side'" (p. 1). He points out, however, that this change also relies on a change in the students' role in terms of responsibility

It is their responsibility to learn as much as it is our responsibility to teach.

and obligation to be active learners. When we first began this study we focused on the issue of improving our students and making them better learners. In the middle of the study we began to focus more on what we, as teachers, could do to improve our own instruction in order to motivate and engage our undergraduate students.

By the conclusion of the study, we realized that it is a two-fold responsibility. As Morrison writes, part of the onus of this task rests on the students themselves. It is their responsibility to learn as much as it is our responsibility to teach.

Responses on question nine on our student survey relate somewhat to this issue. In class A, a larger number of students expressed motivators to learning that dealt more with an internal drive to do well and be the best they could be as a teacher. This caused us to question why and to look for what might be the differences between the two classes. A deeper analysis revealed that there were more non-traditional, or older, students in Class A than there were in Class B. These older students seemed to exemplify what Morrison (2014) saw as a change in a student's role—the realization that it was their responsibility to learn. However, it is not always the non-traditional student with this type of intrinsic motivation. We have encountered many traditional students who demonstrate that internal drive to learn.

The TPT Cognitive Engagement Model and Quadrant Analysis procedure helped us to dramatically change our methods of teaching. Previously we had attempted activities that we thought would engage our students during class. We would show videos, ask questions, lecture with PowerPoint, and form small groups to participate in application activities related to assigned readings. Analysis of these activities made us realize that our activities were more in quadrants one and two than in three and four. Our former activities depended upon the ability to remember information, demonstrate comprehension, and apply learning in concrete situations. Total participation techniques and others found in the literature were incorporated into our teaching with more deliberation and true purpose in order to engage all students at higher-levels of cognition.

The survey data demonstrated that a majority of students felt that the collaborative activities helped them understand the content better and motivated them to learn more about the content.

The survey data demonstrated that a majority of students felt that the collaborative activities helped them understand the content better and motivated them to learn more about the content. However, we have no solid evidence that students actually learned the material better. This leaves us with another question—what is the relationship between student engagement and academic achievement itself? National concerns have been raised by such recent publications as *Academically Adrift* (Arum & Roksa, 2011), which presents issues concerning the lack of real learning in institutions of higher education. Further exploration in this area—the relationship between student engagement and academic achievement itself—would be warranted as an extension of this research.

References

AlKandari, N. (2012). Students' communication and positive outcomes in college classrooms. *Education*, *133*(1), 19-30. Retrieved from http://www.ingentaconnect.com/content/prin/ed;jsessionid=bc9rma4v857d.alexandra

Anderson, L. W., & Krathwohl, D. R. (Eds.), Airasian, P. W., Cruikshank, K. A., Mayer, R. E., Pintrich, P.R., . . . Wittrock, M. C. (2001). *A taxomony for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives* (Complete edition). New York, NY: Longman.

Arum, R., & Roksa, J. (2011). *Academically adrift: Limited learning on college campuses*. Chicago: University of Chicago Press.

Auman, C. (2011). Using simulation games to increase student and instructor engagement. *College Teaching*, *59*(4), 154-161. Retrieved from http://www.tandfonline.com/loi/vcol20

Barkley, E. F. (2010). *Student engagement techniques: A handbook for college faculty.* San Francisco, CA: Jossey-Bass.

Beran, T., & Violato, C. (2009). Student ratings of teaching effectiveness: Student engagement and course characteristics. *Canadian Journal of Higher Education*, *39*(4), 296-306. Retrieved from http://ojs.library.ubc.ca/index.php/cjhe

Bloom, B. S., Englehart, M. D., Furst, E. J., Hill, W. H., & Krathwohl, R. R. (Eds.). (1956). *Taxonomy of educational objectives: The classification of educational goals* (Vol 1.Cognitive domain). New York, NY: David McKay.

Chiu, Y. J. (2009). Facilitating Asian students' critical thinking in online discussions. *British Journal of Educational Technology*, *40*(1), 42-75. doi:10.1111/j.1467-8535.2008.00898.x

David, M. (2004). What does it mean to participate in class?: Integrity and inconsistency in classroom interaction. *Journal of Classroom Interaction*, *39*(1), 19-29. Retrieved from http://www.jciuh.org/

Finkel, D. L. (2000). *Teaching with your mouth shut*. Portsmouth, NH: Heinemann.

Freeman. M., Anderman, L. H., & Jensen, J. M. (2007). Sense of belonging in college freshmen at the classroom and campus levels. *The Journal of Experimental Education*, *75*(3), 203-220. doi: 10.3200/JEXE.75.3.203-220

Fredericks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of evidence. *Review of Educational Research*, *74*(1), 59-109. doi: 10.3102/00346543074001059

Freire, P. (2000). *Pedagogy of the oppressed*. (30th anniversary edition). New York: Continuum International Publishing Group. (Original work published 1970).

Goldberg, N., & Ingram, K. (2011). Improving student engagement in a lower-division botany course. *Journal of the Scholarship of Teaching and Learning*, *11*(2), 76-90. Retrieved from http://josotl.indiana.edu/

Himmele, P., & Himmele, W. (2011). *Total participation techniques*. Alexandria, VA: Association for Supervision and Curriculum Development-ASCD.

King, A. (1993). From sage on the stage to guide on the side. *College Teaching*, *41*(1). 30-35. Retrieved from http://www.tandfonline.com/loi/vcol20

Morrison, C. D. (2014). From 'sage on the stage' to 'guide on the side': A good start. *International Journal for the Scholarship of Teaching and Learning*, *8*(1), Article 4. Retrieved from http://digitalcommons.georgiasouthern.edu/ijsotl/vol8/iss1/4

Pellicer, L., & Anderson, L. (1995). *A handbook for teacher leaders*. Thousand Oaks, CA: Corwin Press.

Petress, K. (2006). An operational definition of class participation. *College Student Journal*, *40*(4), 821-823. Retrieved from http://www.projectinnovation.com/college-student- journal.html

Rocca, K. A. (2008/2009). Participation in the college classroom: The impact of instruct immediacy and verbal aggression. *Journal of Classroom Interaction*, *43*(2), 22-33. Retrieved from http://www.jciuh.org/

Weiman, C., & Perkins, K. (2005). Transforming physics education. *Physics Today*, *58*(11), 36-49. Retrieved from http://scitation.aip.org/content/aip/magazine/physicstoday/issues;jsessionid=4cwco90fbge16.x-aip-live-02

Yokomoto, C. F., & Ware, R. (1997). Variations of the group quiz that promote collaborative learning. *Proceedings of the Frontiers in Education Conference*, *1*, 552-557. doi: 10.1109/FIE.1997.644946

Appendix A

Classroom Activities Used During the Study

Classroom Activity:	Description:
• **Debate Team Carousel** (Himmele & Himmele, 2011)	Students debate an issue in small groups, offering opposing viewpoints and validating with support from class texts/discussions.
• **Group Quizzes** (Yokomoto, C. F. & Ware, R., 1997)	Students form small groups and respond to 2-3 quiz questions from classroom readings. They present their answers to the whole class and are allowed to debate responses.
• **Chalkboard Splash** (Himmele & Himmele, 2011)	All students record their responses to a key question on a large board of poster and then analyze peer responses for similarities, differences, and surprises.
• **Conceptual Workshop** (Finkel, 2000)	Students work collaboratively in small groups to answer a set of questions that all lead to an understanding of the central concepts.
• **Three-Sentence Wrap-Up** (Himmele & Himmele, 2011)	Students summarize what was learned in 3 sentences or less.
• **Similes** (Himmele & Himmele, 2011)	Students compare two unrelated things in order to demonstrate abstract thinking about key concepts in a way that sums up meaning.

Appendix B

Description of 2 Quadrant Four Activities

Debate Team Carousel (Himmele & Himmele, 2011, p. 95)

1. Give your opinion and explain your rationale. Record your opinion and explain your reason for it.	**2. Add a support argument.** Read your classmate's response. In this box, add another reason that would *support* your classmate's response.
3. Add an opposing argument. In this box, record a reason that might be used to argue *against* what is written in boxes # 1 and #2.	**4. Add your "two cents."** Read what is written in the three boxes. Add *your opinion* and *your reason* for it in this box.

Conceptual Workshop (Finkel, 2000)

Conceptual Workshop: Dyslexia
Part I (20 minutes): Divide into groups of 4 and select one person ahead of time to record the answers on another sheet of paper. Select another person to keep track of time to make sure the group answers all questions in the allotted time. Each person in your group must participate in developing the answers to the questions below. You may use the PowerPoint or articles provided or other sources of legitimate information. 1. List the key elements that are used to define dyslexia. Put these into your own words—don't just copy the phrases from the text. Then write a definition that you could use to explain dyslexia to parents or other non-educators. 2. Based on what you read, explain what is meant by "the phonological component of language". Again, use your own words. List the key facts that educators should understand about this area. 3. Describe how you would identify this learning problem as a classroom teacher.   **Part II (30 minutes):** Think about what you discussed with the questions above, about the information in the PowerPoint, and the information in Cunningham's book *Phonics They Use*. What type of remediation program could you develop to help a student with dyslexia?

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Creative Writing Assignments in a Second Language Course: A Way to Engage Less Motivated Students

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This article makes a case for using creative writing in a second language course. Creative writing increases students' enthusiasm for writing skills development and supports students' creativity, which is a fundamental aspect of education. In order to engage less motivated students, a series of creative writing assignments was implemented in a second language writing course. This study presents the rationale for the use of creative writing grounded in critical pedagogy and the context of instruction. Data collection focused on the content of students' writing and their attitudes towards creative writing and critical pedagogy. The results show that all the participating students found the assignment both enjoyable and beneficial for the development of their writing ability. However, the students' perceptions of critical pedagogy varied. The author argues for greater employment of creative writing in second language courses in the future.

Second language (L2) composition instructors have long been interested in providing additional language practice opportunities to L2 writers. Plenty of research studies have reported the benefits L2 students gain by engaging in the additional writing practice. For instance, the use of dialogic journals expands the contexts of writing for English as a Second Language (ESL) students and serves as a useful learning strategy (Holmes & Moulton, 1997). The use of journals leads to increased fluency in writing and greater motivation to write. In addition, students are able to learn through models provided by the instructor in his/her responses to journal entries. In this way, students can improve their writing noticeably (McDonald, Rosselli, & Clifford, 1997). Other researchers point out that in ESL classes there are students who are culturally quieter or students who are uneasy speaking out in English. These students who are reticent to speak in class can use journals to express and share their ideas in writing in a non-threatening format with instructors and/or peers (Spack & Sadow, 1983). Finally, response writing can motivate low-achieving students (Lee, 2012) and help promote students' more sophisticated thinking (Bilton & Sivasubramaniam, 2009).

In order to address the issue of engagement, boost student confidence as L2 writers, and increase writing fluency, a series of creative writing exercises was introduced in the ESL advanced-level writing course during the fall semester of 2014.

The idea for this study dates back to 2013, when the author of this article (also, the researcher) started teaching an ESL advanced-level writing course offered to international undergraduate students at an intensive English program in a southwestern American university. Based on the author's own observations, the majority of students struggle with the course content, demonstrating difficulties in a number of areas. The causes of students' struggles can be attributed to: (a) limited English training in high schools and (b) they are not English majors. In addition, students show low levels of engagement with class activities and assignments during class meetings. Also, end-of-semester evaluations show that students are not interested in taking the course from the start. Specifically, the average scores to the item "I really wanted to take this course" were 3.0 and 2.8 (out of 5) for the spring and fall of 2014 semesters respectively.

In order to address the issue of engagement, boost student confidence as L2 writers, and increase writing fluency, a series of creative writing exercises was introduced in the ESL advanced-level writing course during the fall semester of 2014. The creative writing assignments are grounded in critical pedagogy (Freire,

1970), dealing with the issues related to marginalized groups of people around the world and various kinds of discrimination based on gender, sexual orientation, and/or ideological beliefs. Because of the students' international backgrounds, the topics related to people's lives around the world were selected aiming to attract their potential interest in these issues.

The current study presents the results of implementing a series of creative writing exercises in an advanced-level ESL course. Data collection focused on the content of students' writing and attitudes towards creative writing and critical pedagogy. The study ends with pedagogical implications of the study and suggestions for further research.

Using Expressive and Creative Forms of Writing with L2 Learners

Recent years witness a growing popularity of using expressive and creative forms of writing with L2 learners. For instance, McDonald et al. (1997) found that the use of expressive writing (dialogic diaries) with ESL students led to qualitative improvements in student writing towards the end of the semester. Additionally, the researchers determined the number of sentences and words in each student's writing at the beginning and the end of the course. They report that that there was little mean change from pre- to post- on any of these ratings; i.e., even though the numbers did go up, but only marginally. In a more recent study, Lee (2012) employed the use of an electronic reading response journal, in which the students expressed their reactions to several literary texts. Lee (2012) reports that the use of expressive writing led to students' overall improvement in writing and that some of the students exhibited great levels of engagement with the assignment by posting poems and other forms of creative writing in addition to their reactions to the texts.

Highlighting the role of expressive writing for L2 writers, Bilton and Sivasubramaniam (2009) argue that today's L2 educators primarily focus on the students' "vocational needs" (p. 303) without paying attention to students' emotional or maturational needs. These researchers explain that the proponents of expressive writing viewed writing as an act of creative expression and a process of discovering meaning (Zamel, 1982). Additionally, by responding to the content of student writing rather than focusing on the grammatical or structural deficiencies, L2 teachers can help "minimize fear, nervousness, and self-consciousness" (Leki, 1992, p. 17) experienced by novice writers. Expressive writing can lead students toward better academic writing (Spack & Sadow, 1983), because by engaging in expressive writing students learn to focus on ideas and, as a result, their written products improve as well (Zamel, 1982).

In addition, infusing L2 writing curriculum with creative writing exercises can help support students' creativity, one of the fundamental aspects of education. In addition, engagement in creative writing activities helps students experience higher levels of enthusiasm and motivation to improve their writing abilities because they can express themselves freely and employ their imagination (Stillar, 2013).

Applying Critical Pedagogy to L2 Classrooms

The person who stood at the roots of critical pedagogy is the Brazilian educator, scholar, and human rights activist Paulo Freire. Freire (1970) observed that generally teachers transfer accepted information to their students without connecting it to the realities of students' lives and then require to reproduce it on tests. As the educator of the oppressed, Freire insisted that education is a political act that, if not seen as such, legitimizes and reproduces the politics of the dominant classes, thus maintaining social disparities (Pagliarini Cox & de Assis-Peterson, 1999). Seeing education as a path to common people's liberation, Freire (1970) proposed that educators engage in a true dialogue with their students, while students problematize reality. In other words, according to Freire, students must learn to identify problems and come to recognize and understand the significance of

those problems with regard to their own lives and the lives of others. To this end, Freire suggested using activities during which learners name, construct, and critically reflect on the realities of their own lives.

The ideas rooted in critical pedagogy are particularly relevant to the L2 teaching context since language learning involves the issues related to power and domination, while avoiding such conversations "becomes, on the one hand, understandable and, on the other, reprehensible" (Pennycook, 1990, p. 305) affair. By infusing L2 writing curriculum with critical discourse, L2 writing instructors can help students develop critical consciousness and empathy and promote students' exploration of the nature of knowledge and power. Recent research (Stillar, 2013) shows that when adopting new identities (e.g., the identities of marginalized or vilified groups of people in the students' dominant cultures), students attempt to challenge the existing status quo and start to develop critical consciousness in relation to societal inequality. By introducing critical discourse into L2 classrooms, writing instructors call attention to the issues related to social inequality and the role of power in today's society (Stillar, 2013).

Graman (1988) shared a personal account of applying the ideas rooted in critical pedagogy with adult ESL learners. In this account, he explained how he was able to shift away from the mechanical drills in grammar and pronunciation found in ESL textbooks to discussing the issues that were of utmost importance to his farm-working students from several countries in Latin America and Spain, eventually empowering them to name, understand, and problematize the world they found themselves in. Stillar (2013), in his research with Japanese English learners in the English as a Foreign Language (EFL) context, reports on promoting greater critical consciousness on the part of the students by asking them to write personal letters and journal entries from the perspective of the people traditionally marginalized or vilified by the dominant class in their culture.

Overall, this study combines and applies the expressive, creative, and critical pedagogy approaches to writing in an advanced-level ESL writing course. The unique contributions of this research are that it reports the findings that have the potential to help review and renew the existing L2 writing curricula for undergraduate ESL students in the U.S. universities. This study pursued three main research questions: (a) How does the use of creative writing assignments mediate student development of critical consciousness?; (b) What are the students' attitudes towards the use of creative writing activities in an L2 writing course?; and (c) What are the students' perceptions of the use of critical pedagogy in an L2 writing course?

Method

Participants

The participants included nine international undergraduate students (four female and five male participants) in their twenties enrolled in an advanced-level academic writing course offered at a southwestern American university during the fall of 2014. The students came from diverse countries such as the Dominican Republic, Slovenia, Iran, South Korea, and Portugal who majored in a number of disciplines such as electrical engineering, landscape architecture, nutrition, and aviation.

The study was conducted with the IRB approval. The creative writing assignments constituted a required part of the advanced-level ESL writing course content. However, this article utilizes the writing excerpts of students who agreed to participate in the research.[1] In order to protect research participants' privacy, the participants' names are not disclosed.

Upon the end of the academic semester, students completed a survey asking them about their attitudes and perceptions with regards to the creative

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[1] Only 7 students allowed me to cite from their essays.

writing assignments and critical pedagogy. The end-of-semester survey questions are provided in Appendix A.

Instructional Context

The ESL academic writing course is designed to teach international first-year undergraduate students common practices associated with academic writing, such as how to summarize an academic text, how to paraphrase and quote from sources, how to choose research topics, conduct library research, organize textual and other kinds of evidence, and use a citation style. In addition, students engage in pre-writing activities and in-class peer reviews, and learn how to revise their academic essays and how to edit their own writing for common grammatical errors.

A set of creative writing assignments was designed by the course instructor (see Appendix B). The assignments required the students to carry out basic library research and consult peers and friends in relation to the topics of the assignments. In this way, the assignments fulfilled one of the course goals. Prior to being assigned with a series of creative assignments, the students were introduced to such concepts as dominant and marginalized groups of people, the notions of critical consciousness, empathy, knowledge, and power in an oral class discussion. Students' writing was graded based on the content (i.e., idea development, persuasive evidence) rather than grammatical, structural or spelling errors.

Mode Inquiry

Grounded in the qualitative methodology approach (Strauss & Corbin, 1998), this study focuses on the content of student writing and student responses to the end-of-semester survey questions. In order to arrive at a view of the participants' experiences, the research design employed grounded theory (Glaser & Strauss, 1967). According to this approach, in order to ascribe a meaning to the experiences of the participants, a researcher must pay attention to the most prominent and recurrent themes in the data.

Data analysis proceeded in two stages. Each time a creative written assignment was submitted by a student, the researcher wrote interpretive memos about the nature of the topics discussed. These memos initially corresponded to the two broad categories identified in literature, which provided the initial guiding framework: critical consciousness and empathy. The second stage of analysis occurred at the end of the course when all assignments and the responses to the end-of-semester survey were collected and a detailed content analysis was carried out. Students' written assignments and responses were read and re-read repeatedly by the researcher. Recurrent concepts and themes were identified through the researcher's multiple rounds of re-reading the data. Each written sample was divided into topics, coded, and sorted into categories, many of which identified from the content analysis and modified the initial categories. For example, a new category "indifference" was created during the analysis and informed the researcher's further investigations and readings.

Results

Research Question 1

To answer the first research question of whether the use of creative writing assignments mediate students' critical consciousness development, the researcher analyzed both the students' replies in the end-of-semester survey as well as the content of students' writing during the course. Appendix C summarizes students' replies to several selected questions from the survey. As can be seen, the majority of the participating students reported on experiencing a greater extent of empathy and critical consciousness as a result of their engagement in the creative writing

activities. At the same time, all but one of the students, were enthusiastic in using the same set of exercises with future students.

In their written assignments, the majority of students also showed a greater extent of critical consciousness towards the end of the semester. For example, while in the first assignment *A Day in the Life of a North Korean,* only two students shared some critical comments about the existing political regime and its elite, in their third assignment *A Letter of a Young Saudi Woman,* all but two students resisted their parental disapproval of their intention to study abroad. The following excerpt from a student's third assignment *A Letter of a Young Saudi Woman* demonstrates the student's ability to exercise her critical thinking skills by recognizing and opposing unstated societal assumptions and values. Here and hereafter, the text in bold indicates the more salient parts of the data, representing more relevance for the article's research questions.

Excerpt 1. I always wanted to study in the United States **but now I realize that it is a difficult step for me because of the ideas about women and women's role in this country. The only possibility for me is that I can get in contact with someone of Islam community in the U.S. to become my guardian on the trip.** Is there someone you know that I can contact?

Moreover, in the second assignment *A Letter to an LGBT Friend,* all the students wrote about their intention both to maintain the friendship and to continue interacting with parents with the purpose of eventually persuading them to accept this friendship. The excerpt below from a student's second assignment *A Letter to an LGBT Friend* shows her ability to evaluate an argument and propose an accurate alternative judgement:

Excerpt 2. My parents consider these people [LGBT] as outsiders, not a part of society and when I told them about you [an LGBT friend] **I was embarrassed by their reaction.** … But anyways we had a long talk and cleared things up and now I think we are even closer. **In the end, they realized that our friendship is not a bad thing for me or will affect me in some way.**

The causes of student s' greater extent of critical consciousness can be attributed to: (a) their familiarity with the topics of the assignments and (b) their attitudes towards the marginalized groups of people discussed in the assignments. For instance, with regards to the first assignment, it was perceived by all the students as the most difficult. In their responses to the end-of-semester survey, two of the students wrote that even though they were aware of the situation in North Korea, they had to carry out some research to find out the details, which was time-consuming. In addition, one of the students said that he was not comfortable writing about North Korea since he doubted that it was possible to obtain accurate information about the country. Students' lack of familiarity with the situation in North Korea might have prompted them to describe it in neutral terms rather than to critically evaluate it. Also, students' attitudes towards the groups of people discussed in the assignments influenced the nature of their writing. For example, a student from South Korea wrote that in her country it was not customary to talk about the situation in North Korea because people did not care (indifference). As a result, her journal entry was described in a neutral manner. In contrast, in his assignment, another student used the following expressions: "in my oppressed country" and "glorious party (sarcastic)". In his assignment, the same student mentioned that he resisted the regime by smoking self-made cigarettes. In his response to the end-of-semester survey, he said the following: "For the first journal, it was truly appalling to know how people are being treated in that isolated country." Apparently, his initial attitude of empathy rather than indifference prompted him to share some critical comments about the existing

In their written assignments, the majority of students also showed a greater extent of critical consciousness towards the end of the semester.

regime. Another critically-minded student admitted contemplating her escape from the country and describing the elite as "they are the only ones who can afford Western brands and goods, they can pay in euros and dollars."

In their responses to the second assignment dealing with the parents' disapproval of their friendship with a member of the LGBT community, all students showed their determination to resist their parents' decision. Some of the students justified their parents' negative reactions by their religious affiliations (e.g., Mormon, Muslim). Interestingly, one of the students returned to this topic (LGBT) in the last (fourth) assignment, probably finding it particularly relevant. In contrast to the first assignment, students had greater awareness of the issues related to the LGBT community. Also, they might have found it easier to resist their parents' decision rather than the policies of a country's regime.

Similar claims can be made in relation to the third assignment, which required students to write a letter to a U.S. pen friend from the perspective of a young Saudi woman whose intention to study abroad is not supported by her parents. All but two students found a resolution to the problem. The excerpt below illustrates one of such solutions.

Excerpt 3. I have been talking to Aladdin [guardian's name] a lot. He is an encouraging person and really comprehensible, therefore, **he would like to help me. We thought that I can go to study abroad, and he can accompany me.**

In the excerpt above, the student decides to ask a male guardian from her home country to accompany her on her trip to study abroad, while another student writes about a guardian in the U.S. Some other student requests advice from her pen-friend in the U.S. about how she managed to come to the U.S. despite parental disapproval of her decision, while a different student mentions a supportive husband. Overall, completing this assignment, the majority of the students demonstrated their ability to recognize a societal problem and offer a viable solution. Interestingly, completing this assignment, one of the students also provided a translation of her assignment in Arabic, whereas another student wrote the text in English and the signature in Arabic.

Finally, students' responses to the fourth writing prompt (see Appendix A) also illustrate students' ability to recognize and critically evaluate unstated unfair assumptions and beliefs:

Excerpt 4. People got into a fight with us because we [an LGBT couple] held hands on the street. … When I woke up, I wanted to report to the police but when I started to talk and saw the policeman's face, **I realized that he was not going to help me. He had such a critical look on his face. I decided not to continue.**

To summarize, the set of creative writing assignments enabled the students to become more critical towards societal inequality as well as prompted some of them to become more empathetic towards the groups of people discussed in the assignments.

Research Question 2

Overall, all the students found the creative writing assignments both engaging and beneficial, which helps to address the second research question about students' attitudes toward the use of creative writing activities. In the end-of-semester survey, one of the students even noted that he would prefer to write more creative writing exercises rather than academic essays. Another student mentioned that given that student writing is not graded based on grammar, spelling or word choice, he feels "more free" and "it helps you get your thoughts on paper." In addition, some other student noted that as a result of his engagement in the creative writing activities, he had increased both his fluency and confidence as an L2 writer since he "had to focus on the depth rather than the grammar" in his writing.

While the students appreciated the use of the creative writing exercises, they also found some of the assignments challenging. In particular, two students found the last (fourth) assignment particularly difficult since they described events happening in their home countries. In this assignment, students wrote about the Haitian refugees' situation in the Dominican Republic, the accidental death of an African American in the U.S, the Yazidis' massacre in Iraq, gay rights, and a gypsy's arranged marriage.

In sum, the students admitted that the creative writing assignments helped them with developing greater fluency and confidence in writing, provided that their writing was not graded based on grammar, spelling or structural deficiencies.

Research Question 3

With regards to the use of critical pedagogy, student perceptions of the use of critical pedagogy in an L2 writing course varied. While most of the students wrote that it was OK to use it in a writing course, one of the students wrote that he really enjoyed "being in another's shoes." Commenting on his overall experience, the same student noted that "I learned how to put myself in that person's shoes, it made me respect and understand others' beliefs." In contrast, one other student mentioned that she would prefer less depressing topics to write about, thus demonstrating her indifference to the needs of those who find themselves in more dire circumstances than herself.

> **While developing a more critical stance towards authorities, some of the students also demonstrated an increased extent of empathy towards marginalized groups of people.**

While developing a more critical stance towards authorities, some of the students also demonstrated an increased extent of empathy towards marginalized groups of people. For example, in her response to the end-of-semester survey, one of the students wrote the following: "This assignment made me more critical towards those people who think that everybody is or should be the same and do not accept people who are different." Another student similarly noted that the assignments "help students think differently." Finally, some other student mentioned that he particularly appreciated learning about social issues and cultural differences through his engagement in the creative writing activities.

Discussion

To summarize, the majority of the students were positive towards the use of critical pedagogy in an L2 writing course, while one of the students proposed to choose less depressing topics to discuss. Among the benefits of using critical pedagogy, students mentioned learning to think differently, being in another person's shoes, and learning to understand and respect cultural differences.

Limitations of the Study

Clearly, major generalizations about the use of creative writing exercises and critical pedagogy cannot be made from this research due to the limited sample (nine participants). In the future, a larger and more diverse sample might be a worthwhile research endeavor.

Conclusion

Overall, the L2 students in this study valued the opportunity to engage in creative writing exercises and benefit from this activity. At the same time, their reactions towards the use of critical pedagogy varied. In this way, the article contributes to the data-driven accounts of international students' experiences with

creative writing and critical pedagogy. Such research can help renew and revise L2 writing curricula at American universities.

The study suggests that creative writing assignments can serve as an important mediational tool that fosters greater motivation and engagement with writing and argues for the need of more research endeavors in this area. Specifically, it seems worthwhile to trace the impact of creative writing assignments on the quantity and quality of student writing in other course assignments such as academic essays. It can be hypothesized that by extending student opportunities to engage in L2 writing, both the quality and the quantity of their writing will improve.

The analysis also makes clear that creative writing activities grounded in critical pedagogy allow different sources of knowledge for L2 writers to come together. Provided that the majority of students were not familiar with the topics they were required to write about, they engaged in additional research as well as consulted peers and friends who might offer accounts of personal experiences related to the topics discussed in class. The extent to which this actually happens depends a great deal on the abilities of both the instructor and the students to search, synthesize, and interrogate material from a range of sources. Yet, there is potential that ideas from personal experience, classroom, instructor, peers, and expert sources can not only coexist, but also blend and influence one another.

Finally, the study's findings points to the efficacy of creative writing not only as a learning space for L2 students, but also as a way for the instructor to interact with students commenting on the content of student writing, which creates a non-threatening environment for L2 learners to express and develop their ideas in writing.

References

Bilton, L., & Sivasubramaniam, S. (2009). An inquiry into expressive writing: A classroom-based study. *Language Teaching Research, 13*(3), 301-320. doi: 10.1177/1362168809104702

Freire, P. (2006). *Pedagogy of the oppressed* (M. B. Ramos, Trans.). New York, NY: Continuum. (Original work published 1970).

Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory: Strategies for qualitative research.* Chicago, IL: Aldine.

Graman, T. (1988). Education for humanization: Applying Paulo Freire's pedagogy to learning a second language. *Harvard Educational Review, (58)*4, 433-448. Retrieved from http://hepg.org/her-home/home

Holmes, V. L., & Moulton, M. R. (1997). Dialogue journals as an ESL learning strategy. *Journal of Adolescent and Adult Literacy, 40*(8), 616-621. Retrieved from http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1936-2706

Lee, H. C. (2012). The reading response e-journal: An alternative way to engage low-achieving EFL students. *Language Teaching Research, 17*(1), 111-131. doi:10.1177/1362168812457539

Leki, L. (1992). *Understanding ESL writers: A guide for teachers.* Portsmouth, NH: Heinemann.

McDonald, B. A., Rosselli, J. A., & Clifford, J. E. (1997). Journal writing: Learning, reflections, and adjustments to American life. ERIC Document Reproduction Service No. ED 423 709.

Pagliarini Cox, M. I., & de Assis-Peterson, A. A. (1999). Critical pedagogy in ELT: Images of Brazilian teachers of English. *TESOL Quarterly, 33*(3), 433-452. Retrieved from http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1545-7249

Pennycook, A. (1990). Critical pedagogy and second language education. *System, 18*(3), 303-314. Retrieved from http://www.sciencedirect.com/science/journal/0346251X

Spack, R., & Sadow, K. (1983). Student-teacher working journals in ESL freshman composition. *TESOL Quarterly, 17*(4), 575-593. Retrieved from http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1545-7249

Stillar, S. (2013). Raising critical consciousness via creative writing in the EFL classroom. *TESOL Journal, 4*(1), 164-174. doi: 10.1002/tesj.77

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research* (2nd edition). Thousand Oaks, CA: Sage.

Zamel, V. (1982). The process of discovering meaning. *TESOL Quarterly 16*(2), 195-209. Retrieved from http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1545-7249

Appendix A

Selected Questions from the End-of-Semester Survey

1. Which of the four assignments did you find the most difficult? Why?
2. Overall, did the assignments help you increase your confidence and fluency as a writer? Why (not)?
3. Did your attitude to any of the groups of people change (e.g., you became more empathetic) or remain the same upon completion of the creative writing assignments? Why (not)?
4. Did the creative writing assignments help you become more aware and/or critical towards societal (e.g., gender, racial/ethnic, socioeconomic, etc.) inequality? Why (not)?
5. Would you recommend the use of this set of creative assignments and topics with prospective students? Why (not)?

Appendix B

Creative Writing Assignments

Assignment 1 "A Day in the Life of a North Korean"

Describe a day in the life of a North Korean from the perspective of the North Korean himself/herself. Carry out basic library research and consult peers or friends, as necessary. Length: 1-2 pages

Assignment 2 "A Letter to an LGBT Friend"

Write a letter from the perspective of a person whose friend is gay, but whose parents do not approve of this friendship. Carry out basic library research and consult peers or friends, as necessary. Length: 1-2 pages

Assignment 3 "A Letter of a Young Saudi Woman"

Write a letter to a U.S. pen friend from the perspective of a young Saudi woman whose intention to study abroad is not supported by her parents. Carry out basic library research and consult peers or friends, as necessary. Length: 1-2 pages

Assignment 4 "A Topic of Your Choice"

Write a letter or a journal entry from the perspective of a person who belongs to a traditionally marginalized societal group. Carry out basic library research and consult peers or friends, as necessary. Length: 1-2 pages

Appendix C

Students' Attitudes and Perceptions of the Creative Writing Assignments

Selected Survey Questions	No (Number of Students)	Yes (Number of Students)
1. Did your attitude (e.g., feeling more empathy) towards any of the groups of people discussed in the assignments change?	4	5
2. Did you become more critical towards societal inequality?	3	6
3. Would you recommend the use of the creative writing assignments with future students?	1	8

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A Dual Approach to Fostering Under-Prepared Student Success: Focusing on Doing and Becoming

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A paired course model for under-prepared college students incorporates a dual instructional approach, academic skill building and lifelong learning development, to help students do more academically and become stronger lifelong learners. In a reading support course, students improved their reading skills and applied them directly to the paired content course. They also developed lifelong learning attributes through increased self-knowledge (using the Effective Lifelong Learning Inventory), reflection, and coaching. Students showed significant gains in lifelong learning, an 85% success rate in the paired content course, and a higher retention rate than students outside the project with similar SAT critical reading scores.

Student college under-preparedness is often addressed by offering an array of skills-based remediation courses. Over time, research has shown that this approach often does not produce the desired outcomes (Clotfelter, Ladd, Muschkin, & Vigdor, 2014; Santiago-Blay, Shaffer, & Eshbach, 2015; Scott-Clayton & Rodriguez, 2012). Yet, what should colleges do when the problem of under-preparedness still exists? Could the problem be more complex than simply addressing the academic skills portion of the equation? This project sought to address the problem of college under-preparedness from two directions: first, to continue addressing weak academic skills; and second, to add an important new component to the mix, namely, to build up lifelong learning attributes that would support students as they work to catch up academically. In the end, our project was concerned not only with what students could *do* academically, but also with whom they would *become* as learners. We chose a paired course model (reading support course paired with an environmental science course) within which to incorporate this dual approach. We hypothesized that this approach would have a positive impact on student success as measured by success rates in the environmental science course, satisfactory retention rates, and increases in student scores on the Effective Lifelong Learning Inventory (ELLI), developed by Deakin Crick, Broadfoot, and Claxton (2004). Our initial findings are promising and an expansion of the model is planned.

The main goal was student success, but what does it mean for students to succeed in college?

The Background and Literature Underlying the Project

The constructs of student success, paired courses, reflective practice, lifelong learning, and reading as a mechanism for learning played key roles in the development of the project and are briefly discussed as they relate to the project.

Student Success

The main goal was student success, but what does it mean for students to succeed in college? Terenzini and Reason (2005) built a comprehensive model that explains the influences on the major outcomes of college: learning, development, change, and persistence. The two main categories of influence that most impact the outcomes of college are: (a) pre-college characteristics and experiences that include academic and personal preparedness for college (among others) and (b) the college experience which involves the organizational context and individual student experiences in and out of the classroom (Reason, 2009). In order for students to succeed (i.e., to reach the stated outcomes) in college, the pertinent influences need to be addressed. The current project attempted to address both pre-college characteristics (academic and personal preparedness) and the organizational context through which change could happen (the paired course model). For many students in this project, pre-college characteristics put them at risk on multiple fronts; including pre-existing science anxiety, academic under-preparedness, low socio-economic status, and first-generation status, as well as English Language Learner (ELL) issues. A major goal of the project was to be cognizant of these challenges and support students through effective course design that targeted both what students could do academically and the learner attributes they needed to become successful college students.

Paired Courses

A major influence on college success is the actual college experience, including both the organizational context and individual student experiences in and out of the classroom (Terenzini & Reason, 2005). This project sought to maximize the impact of classroom experiences through careful planning of activities to foster stronger connections between the content of both the reading course and the environmental science course. Another goal was to encourage a sense of belonging through increased student-student and student-faculty interactions. This is especially important on a commuter campus where social connections can be hard to make. The paired course model provided greater opportunities for students to make these connections and receive support throughout the semester and beyond. The benefits of this type of paired course model are supported in the literature by Zhao and Kuh (2004) who describe the "added value" of learning communities, especially when "faculty members teaching the common courses structure assignments that require students to apply what they are studying in one course to other courses and assignments" (p. 116). This approach was a critical part of the design.

Reflective Practice as an Avenue of Self-Discovery and Change

Opportunities for reflection, coupled with meaningful conversations with caring faculty members, can help students make positive and powerful changes in their lives (Deakin Crick et al., 2004; Dzubak, 2013; Shaffer, in press). Jack Mezirow (1998) and others like Stephen Brookfield (1995) and Richard Paul and Linda Elder (2006), write about the power of critical reflection to transform lives. Through a cycle of self-knowledge, purposeful reflection, action planning, and coaching, students are given the tools they need in order to understand what works in their lives and what needs to change (Deakin Crick et al., 2004).

Mezirow (1998) discusses the important role of imagination in the reflective process – one's ability to imagine things differently from the current state. Ullmann, Wild, and Scott (2013) call reflection a "rare good" (p. 29) illustrating the benefits of reflective practice but at the same time pointing out the rarity of quality reflections. Direct instruction of effective reflective techniques helps students to constructively break free from negative patterns of behavior or self-defeating ways

of interpreting the world to imagine new realities. Self-knowledge derived from ELLI scores and environmental science exam grades, meaningful reflective prompts, and effective faculty coaching provided students with an opportunity for self-discovery leading to positive change.

Lifelong Learning Attributes

A 2015 content analysis of 185 recent research articles on lifelong learning showed a resurgence of interest in this topic from educational researchers (51% of the total studies) followed closely by business researchers (43%) and other disciplines (Head, Van Hoeck, & Garson, 2015). Research topics fell into four major categories including organizational climate, learner characteristics, market and social policies, and underserved populations. This demonstrates the interest in lifelong learning across a wide spectrum of human experience. Research in the United Kingdom, which is where we eventually found the lifelong learning measure, ELLI, led the way with 20% of the total studies.

We wanted students to develop positive traits as learners that would support them beyond their first semester in college. We chose ELLI, developed at the University of Bristol (UK) in 2004, because of its strength in differentiating between "efficacious, engaged, and energized learners and passive, dependent, and fragile learners" (Deakin Crick et al., 2004, p. 247). Exploratory factor analysis and scale reliability calculations were done across a large sample (approximately 10,000 students across 122 institutions and 413 classrooms) providing evidence of the scale's "stability, reliability, and internal consistency over time" to measure the seven dimensions of "learning power" (Deakin Crick & Yu, 2008, p. 387). Student scores on ELLI provided a powerful starting place for discussion, reflection, and change.

Reading as a Mechanism for Learning

Students' declining reading ability is an important factor in their diminishing academic preparedness. In 2012, only 52% of U.S. high school graduates met the ACT's benchmark in reading, predicting success (with a *B* grade or better) in their first year in college (Venezia & Jaeger, 2013). Reading skills needed to prepare for contemporary careers are more complex than ever before. Becoming a competent reader today means continually developing over the lifespan, refining the ability to think critically and analytically about text, as well as continually evaluating a never-ending stream of information (Alexander & Disciplined Reading Learning Research Laboratory, 2012). Students who enter college with low reading abilities are already at risk because of the very nature of college-level reading, which is higher in volume than students are used to and which also requires the ability to learn independently from more complex texts.

To help students acquire these higher-order reading skills, the course used a variety of approaches to address information processing, metacognition, and critical thinking (Karpicke, Butler, & Roediger, 2009; Kashdan et al., 2009; Nosich, 2012; Shaffer, 2014; von Stumm, Hell, & Chamorro-Premuzic, 2011; see Appendix). Students practiced these techniques in class and then integrated them into their weekly toolbox assignments using the environmental science textbook. The paired course model became a very effective strategy for helping students become stronger readers and learners through the direct application of learned skills into the environmental science content.

The Model

To address the dual areas of (a) academic skills, labeled as "doing", and (b) lifelong learning, called "becoming", we developed a six-credit paired course model in which under-prepared (identified through low SAT critical reading scores), full-time, first-year students were simultaneously enrolled in a college reading

support course and an environmental science course. Reading skills and study strategies were taught and then applied during the reading course to the material in environmental science. The environmental science course was taught as a traditional lecture-based course with exams and assigned readings. Students could enroll in environmental science without also being in the paired reading course. These students served as the control group for lifelong learning comparisons. In addition to teaching academic skills in the reading course, lifelong learning skills were explicitly taught and integrated into reflective assignments and classroom activities. Success rates in the content course were tracked (exam grades and overall course grades) along with retention rates to determine if students completed the course successfully and were still enrolled for the next semester after the course offering. Changes in lifelong learning attributes were measured using ELLI, a 72-item online self-report that measures dispositions in seven areas found to influence competence as an "intentional" learner: resilience, creativity, changing and learning, meaning-making, strategic awareness, critical curiosity, and learning relationships (Deakin Crick et al., 2004).

Reading course instructional strategies: Doing. Reading course instructional time was divided equally between academic skill building, as it applied to learning environmental science content, and lifelong learning skill development. The academic skill-building portion of the course addressed issues such as vocabulary development systems, information processing strategies, effective textbook reading, studying for exams, metacognition, and critical thinking. A typical lesson would include the introduction of several strategies related to the topic and an in-class demonstration of the application of the strategy, followed by a "toolbox assignment" that students would complete for the next class in which they applied the learned strategies to the environmental science content (see Appendix). Students enjoyed these assignments and reported a positive impact on their environmental science scores. One student commented in an electronic journal entry, "Some success that I have come across would be in my science class when I first started I thought that I wouldn't get a good grade in anything but later on I saw that all I have to do is apply myself . . . and then the material comes easy. All it takes is practice and not just throwing in the towel when the going gets tuff" (Student A, personal communication, December 5, 2013). Students found that successfully *doing* the work of college is possible with the right motivation, skills, and focus.

Reading course instructional strategies: Becoming. We wanted students to gain mastery of the environmental science content, but equally as important, we wanted them to develop positive traits as learners that would support them beyond their first semester in college. Students took ELLI during the first week of classes and received their scores in the form of a spider diagram (see Figure 2). The spider diagram allows students to see their initial profiles holistically as represented by their scores for the learning dimensions. When the post-semester scores are added, students then can see their growth in all seven dimensions as a comparison between the two concentric circles on the diagram. The class focused on a single dimension of ELLI for a two-week period before moving onto the next element. Self-knowledge, reflection, and coaching were used to help students grow in each dimension. The first week, students completed activities and reflections about the lifelong learning element in their lives. The second week took on a more academic focus, with students making connections between the lifelong learning dimension and college life in general or the

The academic skill-building portion of the course addressed issues such as vocabulary development systems, information processing strategies, effective textbook reading, studying for exams, metacognition, and critical thinking.

environmental course specifically (see Appendix). Over time, the goal was to encourage the development of a common language and practice of lifelong learning (Deakin Crick et al., 2004).

The lifelong learning portion of the course was very fluid, depending on what was happening in either paired course. The key element was to give students an opportunity to understand themselves as learners and then provide effective prompts that helped them uncover meaningful insights academically and personally (Brookfield, 1995; Deakin Crick et al., 2004; Dzubak, 2013; Mezirow, 1995; Shaffer, in press). Over time, most students identified significant changes in themselves. The process came to a climax during the last week of classes when students retook ELLI. The new spider diagrams showed concentric pre- and post-scores which allowed students to see immediately their areas of growth since the beginning of the semester (see Figure 2). Electronic journal entries also captured this awareness about the important ways in which they had grown over the semester. One student who had struggled tremendously with both language and confidence wrote, ". . . at the beginning I though[t] I was the only one who was behind and didn't know a lot because [of] my language issue but I see now that everyone here is like me - they don't know everything as I though[t] and it help me to feel a little better of myself because I don't feel . . . less intelligent, so in this whole semester I learned different thing in area that I improve myself and no[t] give up . . . so on that way I feel proud [of] myself" (Student B, personal communication, December 5, 2013). As an instructor, it was very powerful to read these words. This particular student was also successful in the environmental science course which helps to illustrate the effectiveness of the model. To see students *become* proud, resilient, confident, and successful in spite of continuing challenges, was incredibly moving.

To see students *become* proud, resilient, confident, and successful in spite of continuing challenges, was incredibly moving.

Method

Participants

Fifteen students consented to participate in the study from the paired course group and finished both courses. These students were first-year, full-time students. During new student orientation, these students were recommended to sign up for the reading course because of low SAT critical reading scores. An additional 18 students (from multiple class years and SAT profiles) completed only the environmental science course without the paired reading course and agreed to participate in the study. These 18 students served as the control group for ELLI score comparisons.

An Institutional Review Board (IRB) proposal was submitted and accepted to complete this study. Informed consent was completed and student permissions obtained in writing to use their data in the form of academic grades, ELLI scores, course satisfaction surveys, and journal entries.

Procedure

Students in both the study and control groups took ELLI during the first and last weeks of the semester. All students attended the three-credit environmental science course that met once per week. In addition to environmental science, students in the study group also attended the paired three-credit reading course that met twice per week.

In our statistical analysis, independent samples *t*-tests were computed using ELLI sub-scale scores for each dimension of lifelong learning for the study group (those in the paired courses) and the control group (those taking only environmental science without the supplemental instruction in the reading course) to identify any differences between groups before the study began (see Table 1).

Table 1

Independent Samples t-test of Significance between Study Group and Control ELLI Scores Pre-Semester

ELLI dimensions	*p*	*t*	M control	SD control	M treatment	SD treatment
Changing and Learning	0.73	-0.35	71.67	14.48	73.33	14.53
Learning Relationships	0.41	-0.84	65.67	15.71	69.80	13.92
Strategic Awareness	0.90	-0.12	58.89	14.82	59.48	14.50
Resilience	0.02	2.41	61.67	14.26	48.82	18.16
Creativity	0.35	-0.94	51.67	15.17	56.43	15.47
Meaning Making	0.66	0.44	71.17	17.04	68.82	15.04
Critical Curiosity	0.99	-1.00	50.21	20.52	50.24	21.17

Note. df = 35

Paired samples *t*-tests were completed at the end of the semester to compare pre- and post-semester ELLI scores for the matched pairs in both control (see Table 2) and study (see Table 3) groups. Student success rates in environmental science were analyzed using descriptive statistics. Retention rates for students in the paired course model were compared to those from the same first-year class with similar SAT profiles who were not in the paired model. Anonymous, reading course satisfaction surveys were analyzed using descriptive statistics (see Table 4).

Table 2

Paired Samples t-test of Significance for Control Group ELLI Scores Pre-and Post-Semester

ELLI dimensions	*p*	% change	*t*	M pre-	SD pre-	M post-	SD post-
Changing and Learning	0.63	3%	-0.49	70.88	14.44	73.68	23.14
Learning Relationships	0.68	-4%	0.42	64.74	15.57	62.11	22.61
Strategic Awareness	0.33	8%	-0.99	59.36	15.08	64.18	18.52
Resilience	0.47	-7%	0.74	61.05	14.38	57.02	20.53
Creativity	0.60	6%	-0.54	51.66	15.59	54.58	20.09
Meaning Making	0.69	-4%	0.40	71.75	17.3	68.95	22.88
Critical Curiosity	0.47	12%	-0.74	48.68	19.89	54.39	23.09

Note. df = 18

Table 3

Paired Samples t-test of Significance for Treatment Group ELLI Scores Pre-and Post-semester

ELLI dimensions	p	% change	t	M pre-	SD pre-	M post-	SD post-
Changing and Learning	0.05	14%	-2.11	70.53	14.53	81.57	14.63
Learning Relationships	0.108	15%	-1.70	67.19	13.92	77.65	17.27
Strategic Awareness	<.001	24%	-4.81	56.73	14.5	73.37	19.91
Resilience	0.027	20%	-2.42	48.77	18.16	59.61	14.58
Creativity	<.001	40%	-5.61	53.8	15.47	75.82	16.98
Meaning Making	0.002	23%	-3.58	68.07	15.04	81.57	11.97
Critical Curiosity	0.005	54%	-3.23	48.47	21.17	65.2	16.92

Note. df = 15

Table 4

End-of-Course (Reading Course) Satisfaction Survey (n = 15)

Question	Response	
How did you feel being part of a research study?	It was a good experience	77%
	Neither good nor bad	23%
Next year, should we keep – lose – or modify the pairing with environmental science?	Keep it	86%
	Modify it – *do it with more courses*	14%
Rate your overall experience with the paired course	Strongly positive experience	79%
	Difficult, but I saw the benefits	21%
Next year, should we keep – lose – modify the following course elements:		
Cornell Notes & applied reading assignments	Keep it	86%
	Lose it	14%
ELLI	Keep it	93%
	Lose it	7%
Lecture & in-class activities	Keep it	86%
	Modify it – *more active learning*	14%
Would you advise a new student next year to take the paired courses?	Yes	100%

Note. Italics reflect student comments.

Results

Our findings supported the hypothesis that creating an intervention for under-prepared college students that combined both academic skill-building and lifelong learning development support student success. The main findings from our data analyses are: (a) there were no statistically significant differences in ELLI scores at the beginning of the semester between the study and control groups (see Table 1), (b) students in the control group who received no explicit instruction in lifelong learning made no statistically significant gains in the ELLI scores pre- to post-semester (see Table 2), (c) students in the study group who participated in the paired course model and who received explicit instruction in lifelong learning made statistically significant gains in all areas of lifelong learning except Learning Relationships. It should be noted that Learning Relationships as a dimension was covered hastily at the end of the last week of classes, so this result is not surprising (see Table 3), (d) students were highly satisfied with the course model and components (see Table 4), (e) the retention rate from fall to spring was 84% for students in the study group as compared to 73% for a comparison group from the same entrance class with similar SAT profiles, and (f) students in the study group had an 84% success rate (grade C or better) in the environmental science course.

Discussion

This study has limitations due to the small number of participants in the initial study. However, student comments in both the journals entries and anonymous surveys suggest that the model is effective. Success rates in the environmental science course as well as the higher retention rates are also promising. These initial findings warrant future replications of the project which may strengthen the findings with time. Implications of the project include possible expansion to other programs and courses in order to reach more students. The model is fairly flexible and could be used as a framework for many types of paired courses, from First-Year Experience courses to summer bridge programs to support course pairings with many combinations of content courses. The results, while preliminary, do seem to be a promising combination for students. Designing a dual approach to help them do more academically and become stronger lifelong learners creates multiple lines of support that are mutually beneficial and produces, perhaps, more impact than using any one approach on its own.

References

Alexander, P. A., & Disciplined Reading Learning Research Laboratory. (2012). Reading into the future: Competence for the 21st century. *Educational Psychologist, 47*, 259-280. doi:10.1080/00461520.2012.722511

Brookfield, S. D. (1995). *Becoming a critically reflective teacher*. San Francisco, CA: Jossey-Bass.

Clotfelter, C. T., Ladd, H. F., Muschkin, C., & Vigdor, J. L. (2014). Developmental education in North Carolina community colleges. *Educational Evaluation and Policy Analysis*. Advance online publication. doi:10.3102/0162373714547267

Deakin Crick, R., Broadfoot, P., & Claxton, G. (2004). Developing an Effective Lifelong Learning Inventory: The ELLI project. *Assessment in Education, 11*, 247-272. doi:10.1080/0969594042000304582

Deakin Crick, R., & Yu, G. (2008). Assessing learning dispositions: Is the Effective Lifelong Learning Inventory valid and reliable as a measurement tool? *Educational Research, 50*, 387-402. doi:10.1080/00131880802499886

Dzubak, C. M. (2013, May 8). A purposeful pause: The role of active reflection in learning, *Synergy*, *6*. Retrieved from Association for the Tutoring Profession website: http://www.myatp.org/resources/journal/synergy-volume-6

Head, A. J., Van Hoeck, M., & Garson, D. S. (2015). Lifelong learning in the digital age: A content analysis of recent research on participation. *First Monday*, *20*(2). Retrieved from http://firstmonday.org/ojs/index.php/fm/article/view/5857

Karpicke, J. D., Butler, A. C., & Roediger, H. L., III (2009). Metacognitive strategies in student learning: Do students practice retrieval when they study on their own? *Memory, 17*, 471-479. doi:10.1080/09658210802647009

Kashdan, T. B., Gallagher, M. W., Silvia, P. J., Winterstein, B. P., Breen, W. E., Terhar, D.,Steger, M. F. (2009). The curiosity and exploration inventory-II: Development, factor structure, and psychometrics, *Journal of Research in Personality, 43*, 987-998. doi:10.1016/j.jrp.2009.04.011

Mezirow, J. (1998). On critical reflection. *Adult Education Quarterly, 48*(3), 185-198. doi:10.1177/074171369804800305

Nosich, G. M. (2012). *Learning to think things through: A guide to critical thinking across the curriculum.* Boston, MA: Pearson.

Paul, R., & Elder, L. (2006). *Critical thinking: Tools for taking charge of your learning and your life* (2nd ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Reason, R. D. (2009). An examination of persistence research through the lens of a comprehensive conceptual framework. *Journal of College Student Development, 50*, 659-682. doi:10.1353/csd.0.0098

Santiago-Blay, J. A., Shaffer, S. C., & Eshbach, B. (2015). SENCERizing a biology general education (gen-ed) course. *Life: The Excitement of Biology, 3*(1), 33-56. doi: 10.9784/LEB3(1)Santiago-Blay.02

Scott-Clayton, J., & Rodriguez, O. (2012, August). *Development, discouragement, or diversion? New evidence on the effects of college remediation* (Working Paper No. 18328). Retrieved from National Bureau of Economic Research website: http://www.nber.org/papers/w18328

Shaffer, S. C. (2014, July 18). *ELLI integration* [Video file]. Retrieved from https://www.youtube.com/watch?v=gK5I_68g0X

Shaffer, S. (in press). Building student capacity for reflective thinking. *The Common Good: A SUNY Plattsburgh Journal on Teaching and Learnin*g.

Terenzini, P. T., & Reason, R. D. (2005, November). *Parsing the first year of college: A conceptual framework for studying college impacts*. Paper presented at the meeting of the Association for the Study of Higher Education, Philadelphia, PA. Retrieved from http://www.augustana.edu/Documents/ir/Parsing%20-%20Framework%20ASHE05ptt.pdf

Ullmann, T. D., Wild, F., & Scott, P. (2013). Reflection: Quantifying a rare good. In M. Kravcik, B. Krogstie, A. Moore, V. Pammer, L. Pannese, M. Prilla, . . . T. D. Ullmann (Eds.), *Proceedings of the 3rd Workshop on Awareness and Reflection in Technology-Enhanced Learning in Conjunction with the 8th European Conference on Technology Enhanced Learning: Scaling Up Learning for Sustained Impact* (pp. 29-40). Retrieved from http://ceur-ws.org/Vol-1103/

Venezia, A., & Jaeger, L. (2013). Transitions from high school to college. *The Future of Children, 23*(1), 117-136. doi:10.1353/foc.2013.0004

von Stumm, S., Hell, B., & Chamorro-Premuzic, T. (2011). The hungry mind: Intellectual curiosity is the third pillar of academic performance. *Perspectives on Psychological Science, 6*, 574-588. doi:10.1177/1745691611421204

Zhao, C., & Kuh, G. D. (2004). Adding value: Learning communities and student engagement. *Research in Higher Education, 45*(2), 115-138. doi:10.1023/b:rihe.0000015692.88534.de
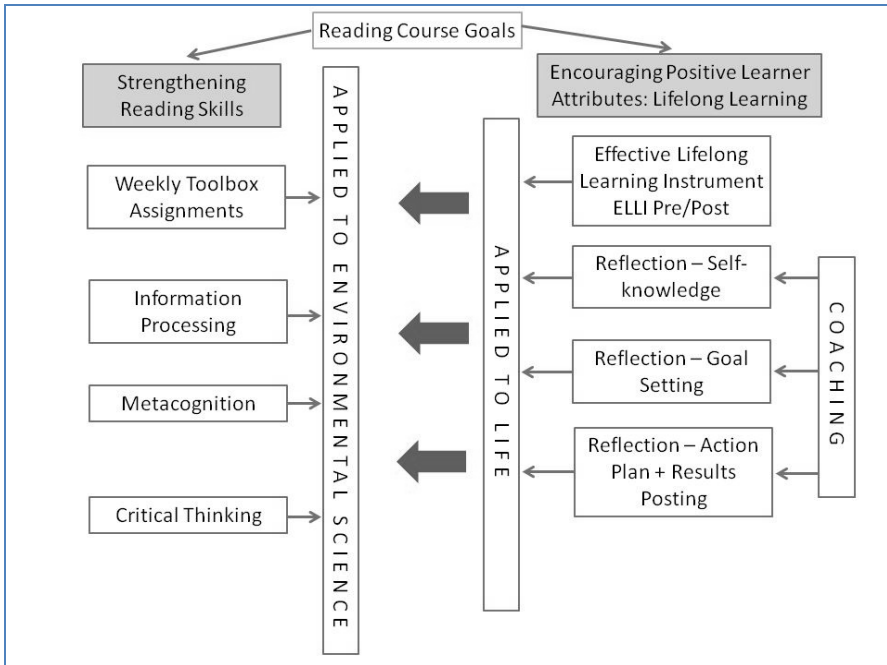
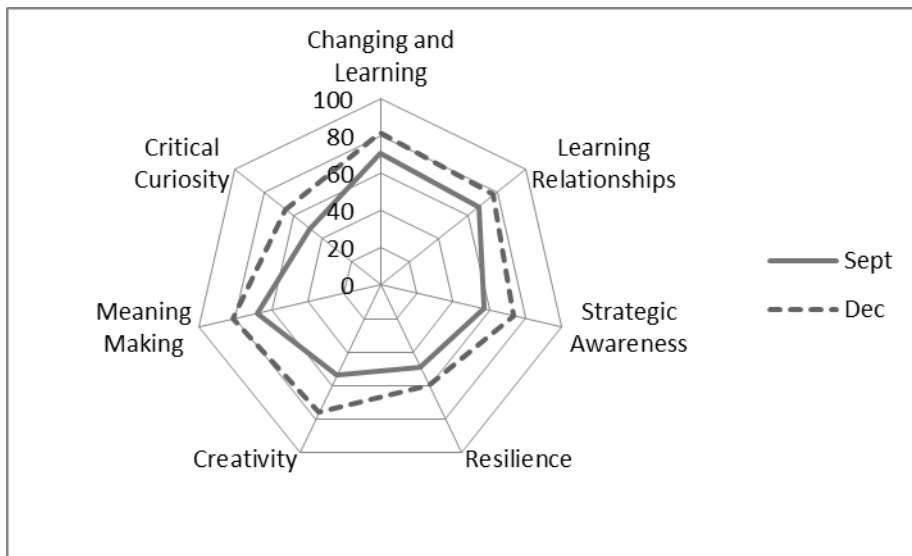*Figure 1.* Paired course design framework.

Figure 2. Spider diagram of student pre- and post-semester ELLI scores.

Appendix

Reading Course Activities

Developing Reading Skills

The course "toolbox assignments" were meant to help students apply strategies learned in class to the environmental science content. Cornell notes, concept mapping, outlining, reading graphs and charts, and vocabulary development were topics covered to build their information processing skills. Students also learned how to become more aware of their metacognitive processes while reading and studying for exams (Karpicke, Butler, & Roediger, 2009). Where were they getting stuck? What questions did they have while reading? What reading/learning strategies were students choosing to use and why? How prepared were they for upcoming exams? Finally, critical thinking and other deep processing techniques, using the Paul and Elder (2006) framework were used to help them develop higher-order reading and thinking skills. One example of each level of activity follows:

Information Processing. Vocabulary development using the SEE-I strategy (Nosich, 2012)
Students fill out an index card for each concept.
S: State it (briefly, clearly, precisely explain the term) "This concept is…"
E: Elaborate it (explain more fully in your own words) "In other words…"
E: Exemplify it (create your our own example) "For example…"
I: Illustrate it (create a metaphor, simile, an analogy, a diagram, a concept map, etc.) "This concept is like…"
Extension activity: This can be turned into a good One-Minute paper to review new concepts at the end of class – Have them fill out a SEE-I on an index card on a main concept from the class and then write a short paragraph with a longer description.

Metacognition. Are you sure you are ready for the exam? (Karpicke, Butler, & Roediger, 2009)

Students get *recognition* of words confused with *comprehension*. They often do not study enough, but think they are ready because they recognize the words. In this activity, students get a blank answer sheet, divided into sections that are going to be covered on the exam. Each section has a heading with that topic. Multiple choice questions (of varying difficulty levels) are asked for each topic. Students fill in the answer sheets and then they self-score their answers. They tally up the points earned for each topic and then circle the areas of weakness indicating review that is needed.

Critical Thinking. Socratic Questioning (Paul & Elder, 2006)

Have student notice the intellectual moves within and between the series of questions.

- What is … e.g. INSERT your CONCEPT HERE
- To answer this question, do we need to answer other questions first?
- Who is in the best position to know what this means? Why?
- Why is this question important?
- How does the answer change when we consider it in different contexts - at work, at school, in the world?
- How would our answer change if we consider it from an "insider" or "outsider" or other perspective?
- What might influence each group's perspective?
- What would you say to someone who says, "xyz" about this concept? What makes people feel this way? What are possible implications of this statement?
- How does one acquire an understanding of concept in the real world?
- Do you think it is important?
- How would you finish this sentence: This concept is like….
- How would you finish this sentence:
  The opposite of this concept is is…..
- If I could draw a symbol for this concept, it would be… because…

Now, take a new course concept and begin designing a Socratic discussion – coming up with 4 questions that you could ask – look for follow-up questions to have ready – practice with a partner.

Extension activity: Students choose one concept from your content course and create a discussion, using similar questions as those above. Choose several concepts from class and have students use the above as a model to build an in-class discussion that they lead in the whole class or as smaller groups.

Developing Lifelong Learning Attributes

What follows is an example of a lesson planning cycle for one of the lifelong learning dimensions. After that, a video link is provided which contains more examples for the other dimensions.

Critical Curiosity. An example of a two-week sequence based on the Critical Curiosity dimension began with a general description from the ELLI literature, followed by an in-class discussion about their ELLI score and the role it might play in their lives and experiences. Students then took another curiosity inventory, the CEI-II, and discussed the notion further based on the new description which takes into account a person's willingness/comfort level with stretching into new experiences and their comfort level with uncertainty (Kashdan et al., 2009). After this discussion and activity, students received a reflective prompt geared towards enhancing their self-awareness and helping them to make a concrete plan to grow

in that dimension. Homework would be to implement the plan during the upcoming week and discuss outcomes at the next session. Coaching by the faculty member and/or peers took place in class and online in journal entries. The second week of this particular cycle, we used a scholarly journal article on the role of curiosity in academic success to frame a discussion about the academic connections to curiosity (von Stumm, Hell, & Chamorro-Premuzic, 2011). The final activity was a strategy to encourage curiosity called What-Why? The instructor places a statement on the board pertaining to something relevant happening in the class. "Students often do not like to speak up in class." The instructor asks, "WHY?" A general discussion ensues and the consensus answer is then placed on the board. "Students feel anxious about giving a wrong answer." The instructor again asks, "WHY?" and the cycle continues as long as the discussion is productive. It is important to debrief the activity to discuss how and when the strategy could be used in personal and academic settings.

More examples. A description of additional examples of lifelong learning integration activities in each dimension was recorded at https://www.youtube.com/watch?v=gK5I_68g0X8 and is called ELLI Integration (Shaffer, 2014).

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Negativity in Massive Online Open Courses: Impacts on Learning and Teaching and How Instructional Teams May Be Able to Address It

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There are many positive aspects of teaching and learning in Massive Online Open Courses (MOOCs), for both instructors and students. However, there is also a considerable amount of negativity in MOOCs, emerging from learners on discussion forums and through peer assessment, from disciplinary colleagues and from public discourse around MOOCs. Through mixed-methods case-study research of two diverse MOOCs (one focused on general, introductory-level content and one designed for specialized graduate students and professionals), we consider the following questions: What are the various forms that negativity takes in MOOCs? How might MOOC negativity vary among disciplines? How does negativity impact MOOC instructors and learners? We present evidence suggesting that MOOC negativity poses a serious problem that may be responsible for instructor/ learner disengagement and instructor burnout, and that anticipating and addressing such negativity can improve MOOC learning communities. Lessons learned from these two MOOCs can be beneficial not only to those involved with MOOCs, but also to those involved in other online educational contexts where faculty and learners seek to manage existing and anticipated negativity.

MOOCs have great potential for creating new learning opportunities and rich learning experiences for participants through sustained peer-to-peer interaction (Brinton et al., 2013; McAuley, Stewart, Siemens, & Cormier, 2010). Because they are grounded in networked learning across global contexts, MOOCs make visible the ways in which knowledge can be socially constructed (Gunawardena et al., 2004; Vygotsky, 1978), especially through cross-cultural interaction (Gunawardena, 2007; Kanuka, 2010). They also make content and expert instructors available to a much wider population than has been previously feasible (Comer, 2014; Kolowich, 2013b; Kouzmanoff, 2014). With over 400 universities offering MOOCS, many instructors have also expanded their classrooms to include MOOC content (Shah, 2014), having their students join MOOCs, watch video lectures and complete assignments within the MOOC platform. For these reasons, there has been considerable enthusiasm for MOOCs (Carver & Harrison, 2013; Daniel, 2012; Weissmann, 2012), even if it is tempered by some concerns about completion rates (Jordan, 2013; Parr, 2013; Peterson, 2014).

However, the very social, interactive features that can make MOOCs so effective can also, paradoxically, facilitate the emergence of a significant amount of negativity that can, in turn, hamper the creation of a meaningful learning and teaching environment. MOOC negativity can emerge from learners on discussion forums or through peer assessment, as well as through disciplinary or institutional colleagues and from the larger public and media discourse on MOOCs. Negativity

takes aim at many targets: a particular MOOC's subject matter, a member of the instructional staff, other learners, the instructional design of the platform, and the larger ideological, political, and economic implications of MOOCs.

Negativity has already infused ongoing conversations about MOOC pedagogy. Some MOOC faculty have shared negative experiences with teaching in the MOOC environment (Head, 2014), and negativity may be a cause of the disengaged and distant role taken by many MOOC instructors (Davidson, 2013; Ross, Sinclair, Knox, Bayne, & Macleod, 2014). While it is rare for instructors to quit a MOOC in midstream,[2] a number of instructors do not offer repeat iterations of their MOOCs (Freedom, 2013; Head, 2013a; McGuire, 2014; Parry, 2013), and still more become disengaged from the MOOCs they are teaching, ceasing to be active on course forums and becoming solely producers of content (Comer, 2014;

> **…the very social, interactive features that can make MOOCs so effective can also, paradoxically, facilitate the emergence of a significant amount of negativity that can, in turn, hamper the creation of a meaningful learning and teaching environment.**

Tham, 2014). While disengaged instructors have become a standard part of conversations about ex-MOOCs (Davidson, 2013; Ramesh, Goldwasser, Huang, Daumé, & Getoor, 2014; Tomkin & Charlevoix, 2014), it is contrary to the connectivist philosophy underpinning early MOOCs (e.g., McAuley et al., 2010), where MOOCs were designed to enable learners and instructors to co-construct a learning community (Kop, Fournier, & Mak, 2011; Siemens, 2005). It is certainly not to the benefit of students if their instructor disconnects from the MOOC, and may contribute to the feeling of disconnection many MOOC learners experience (Rice, 2014; Warner, 2013), and the phenomenon of students eventually ceasing to participate in MOOCs or dropping out, a widely-discussed concern (e.g., Clow, 2013).

In this paper, we investigate the phenomenon of negativity in MOOCs: What are the various forms of negativity in and around MOOCs? How might negativity vary among disciplines? How does negativity impact instructors and learners in MOOCs? We examine these questions through mixed-methods research in two MOOC case studies: Denise Comer's English Composition I: Achieving Expertise (EC) (2013), Duke University and Coursera; and Ryan Baker and Elle Wang's Big Data in Education, Teachers College (2013), Columbia University and Coursera. By studying two distinct MOOCs, we can shed light on aspects of MOOC negativity that extend beyond one context and develop recommendations for how to better manage MOOC negativity to create more effective learning communities. Doing so will also enable instructors across other online educational contexts to consider MOOC pedagogy as an opportunity for the kind of "deep learning" that John Draeger (2013) notes makes the scholarship of teaching and learning so valuable and transferable.

Literature Review

MOOCs may be a new type of online learning platform, but we can understand MOOC negativity in light of prior work studying the presence and role of negative emotions and behaviors in online communities, the impact of negativity in learning and teaching, and the effects of negativity on human behavior and health.

Because MOOCs have been touted as having such disruptive potential to postsecondary education (Lenox, 2014; Wente, 2012; Whitchurch, 2012), scholarship on the impact of disruptive technologies (Christensen, 1997; Danneels,

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[2] However, it has happened. For example, in February 2013, Richard McKenzie left his MOOC during week 5 with the following pronouncement: "Because of disagreements over how to best conduct this course, I've agreed to disengage from it, with regret" (Kolowich, Professor leaves, 2013a).

2004) provides one relevant lens for understanding MOOC negativity. This scholarship demonstrates that disruptive technologies often precipitate "the displacement of established [entities] by new entrants" (Gaigher, 2014, p. 264), and thereby generate a considerable amount of disagreement, anxiety, and competition.

MOOC negativity may also be understood through research about online communication. While negativity has been found in some research to account for a very small percentage (0.2 percent) of online communication (Rice & Love, 1987), other research has found it can have a damaging effect on online communities (Chen, Wu, Srinivasan, & Zhang, 2011; O'Sullivan & Flanagin, 2003; Shachaf & Hara, 2010). Some researchers have found that online interpersonal communication can be challenging due to a lack of face-to-face cues (Bazarova & Walther, 2009; Walther, Anderson, & Park, 1994). These conditions, along with the lack of consequences afforded by anonymity, can manifest in negative behaviors such as flaming (Walther et al., 1994; Willard, 2007)[3] and trolling (Culpeper, 2010; Hardaker, 2010).[4]

Negativity can have a significant deleterious impact on the MOOC learning environment. Negativity can unproductively permeate the atmosphere of a MOOC's discussion forum through emotion contagion (Coviello, 2014; Kramer, Guillory, & Hancock, 2014) and can reduce both student and instructor engagement. Research indicates that attitude has a strong correlation to learner motivation, particularly in online environments (Wen, Yang, & Rosé, 2014), and if negativity prevails, MOOC students' motivation to engage with or complete the course will likely decline. There is some evidence that higher education faculty are particularly susceptible to burnout and that this incidence is correlated to increased complexity of teaching, such as in online environments, and to increased numbers of students (Blix, Cruise, Mitchell, & Blix, 1994; Hogan & McKnight, 2007; Lackritz, 2004). Instructor burnout from MOOC experiences may also impact other aspects of faculty members' professional performance, engendering unanticipated costs to their institutions and to other organizations with which the faculty members are affiliated (Halbesleben & Buckley, 2004; Shirom, 2003).

MOOC negativity is compounded by scale: With tens of thousands of learners, there will undoubtedly be some that engage in negative behavior. Hence, negativity will be difficult to escape, even in successful courses where the majority or super-majority of learners are satisfied. Some studies have suggested that negativity has a disproportionate impact compared to its frequency (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Kensinger & Corkin, 2003). Additionally, research suggests that the impact of negativity varies considerably across individuals; thus, a particular individual's response to negativity cannot always be predicted and is not necessarily correlated to the type, degree, or quantity of negativity (Fredrickson & Losada, 2005; Tugade & Fredrickson, 2004). Therefore, negativity may have an outsized impact on instructors or learners, regardless of how much total negativity is seen and what proportion of behavior is negative. More broadly, negativity can disproportionately shape public, institutional, and industry perceptions about a specific MOOC, MOOCs more generally, or particular MOOC platforms. This negativity can extend to overall perceptions of particular institutions, faculty, disciplines, or about online learning writ large.

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[3] Flaming has been defined in a variety of ways but "can be thought of as uninhibited behavior of … users that is revealed in the exchange of emotionally charged, hostile and insulting messages (Thompsen, 1993).
[4] Hardaker defines trolling as:
> A troller is a CMC user who constructs the identity of sincerely wishing to be part of the group in question, including professing, or conveying pseudo-sincere intentions, but whose real intention(s) is/are to cause disruption and/or to trigger or exacerbate conflict for the purposes of their own amusement. (2010, p. 237)

Case Study #1

English Composition I (called EC below), taught by Comer and offered through Duke University in partnership with Coursera, ran from March – June 2013.[5] Course enrollment began at 64,000+ and reached 82,820 by the final week. The course provided an introduction to college-level writing. Instructional elements included four main writing projects (drafted and revised with peer feedback): didactic videos, instructor-directed and open-ended discussion forums, self-reflections conducted through open-ended questions using the platform's quiz feature, and optional Google Hangout writing workshops. Peer feedback consisted of a formative stage, where three peers provided formative feedback on drafts according to a rubric, and an evaluative stage, where four peers rated final versions on a scale of 1-6 according to a rubric.

A total of 1,289 learners earned a Statement of Accomplishment, which required a final grade of at least 70%. While this rate of completion is low, it makes some sense, given that the course lasted 12 weeks and demanded rigorous, time-consuming effort at peer review and writing, and that the instructor's approach emphasized that any effort devoted to writing, even minimal or selective engagement with the course, could be a worthwhile endeavor.

By many measures, EC yielded mostly positive outcomes. Data from a qualitative coding of EC discussion forum posts show that student attitude was 3.9 times more likely to be positive than negative, and that only 7.02% of all coded posts were negative (Comer, Clark, & Canelas, 2014, pp. 40-41). Post-course student evaluation survey results indicated high learner satisfaction (Comer & White, in press). Learners posted many positive comments on discussion forums (*"I appreciate all the hard work … my reviewers went to . . . thank you!"; "I am very impressed with the quality of this class, as well as with how very clearly intelligent our professor is!"*)[6] and published positive feedback about EC in other online spaces (Franco, 2014). Several institutions have since borrowed instructional material, and Comer received the 2014 Duke University Award for Teaching with Technology, in large part due to the MOOC.

Still, the instructor perceived a high degree of negativity, resulting in instructor fatigue (Comer, 2014). Learners also perceived negativity, and this negatively impacted some learners' experiences in the course. The disconnect between evidence and impression underscores the damaging and disproportionate impact negativity can have (e.g., Baumeister et al., 2001; Kensinger & Corkin, 2003). The sections below outline the negativity that emerged throughout the course.

Negativity toward Discipline (Writing)

Perhaps more than some other disciplines, writing can generate negativity. Learners expressed negative attitudes toward writing in numerous ways, from perceived poor writing abilities (*"I'm twenty two years old and a terrible writer, from Brazil."*) to a general dislike for writing (*"I'm not a writer because I hate writing."*). Many learners shared prior negative writing experiences: *"When I enrolled in middle school, my … teacher who was terrible, always thought what I write was terrible, that's when I started to hate writing."*

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[5] EC was funded largely through the Bill & Melinda Gates Foundation, with additional support from Duke University and Coursera.
[6] EC discussion forum posts have been deidentified to preserve anonymity. Some posts have been slightly edited where necessary for grammatical correctness or clarity.

Negativity toward Course

Negativity toward various aspects of the course often resulted from confusion, despite instructional staff clarifying procedures, and this negativity manifested in frustration and anger. Forum titles related to course content, such as the following, invited ongoing conversations grounded in negativity: "*Seriously, this is the class?*"; "*Holy cow, what a verbose course!*"; "*I could barely read this [text] for irritation!*"; "*The blind leading the blind; …. (my thoughts on the peer evaluation process)*; "*More than disappointment*"). "*This course ha[s] made a lot of people unhappy.*" Although, as stated above, our qualitative coding suggested that only 7.02% of all discussion-forum posts were negative, this negativity at scale permeated nearly all the discussion forums. Negativity toward the course tended to emerge primarily toward the following aspects:

Platform/Instructional Design	"*How did you upload your essay? I can't even figure [it]out…!*"; "*My oh my am I confused and lost.*"; "*This course is a mess.*"; "*The site is hard to navigate.*" "*I was so looking forward to this course, and am enjoying the lectures, but then … it falls flat with a massive fail.*" "*I'm so angry and frustrated I could scream.*"
Grading Criteria	"*I am very disappointed with my grade as well, after studying so hard, and not being given a statement of accomplishment. This is the only course that had very strict grading policies, and I am really sorry that I dedicated my precious time studying so hard for it, and the only feeling that has remained is the bitter feeling, nothing else.*"
Readings	"*Sorry to say it, but this course is a pain in the neck. If future writing assignments are somehow related to [this reading] then I may drop the course. This is really stupid! I feel like I am being brain washed.*"
Writing Assignments	"*Am I alone in wondering why we've been set an assignment to explicate a visual image …? [S]eriously, 600-800 words … This would be a worthy task for an art history student - let alone for a group of budding writers.*"
Lessons/Lectures	"*Tell me what you learned from Prof. Comer's lecture about how to evaluate claims. How do you spot fallacious thinking and respond to it according to Comer? Or stylistically how can you avoid simple declarative sentences that open with subject-verb? There was some instruction on passive/active voice and place holder subjects, but I really expected a lot more.*"

Negativity toward Instructor

Some negativity was aimed directly at the instructor. One such series of posts came from Student A: "*Hi folks, I really can hardly believe what I have just seen. There is a difference between being polite and being gullible. Obviously Professor Comer uncritically buys [this reading's] self-help psychobabble. My mistake: I thought this was a course in critical thinking? Heigh ho, it is a learning experience. If this is the standard of thought of the person in charge of the course, why should I want to go on with it? Help me out here. Kind regards, [Student A].*"

Another post by Student A sought to undercut the instructor's reputation and authority, while also criticizing other learners in the course: "*I had assumed that the sample of participants that Prof Comer would pick for the Hangout would*

reflect the diversity of viewpoints in these forums. Instead, maybe by picking participants by lottery, what we saw was probably a perfectly representative slice of the predominantly uncritical participants in this course. Shame, it sent a message that started me checking the academic credential of Duke and Comer and thinking my time might be better spent on a Harvard, Yale or MIT MOOC."

While some peers countered Student A's posts, Student A also garnered forum fans: "*I'm bothered when I read others commenting on Comer's brilliance and [Student A's] arrogance. It is actually the other way around! Where is the brilliance that constructs an instructor-centered course instead of a learner centered one? Where is brilliance when lectures from a face-to-face course are simply taped and posted as assignments with little justification for their basis or relevance? And where is brilliance when commonly understood best practices are ignored?"*

Negativity and Peer Interactions in Discussion Forums

Negativity also emerged in peer-to-peer interactions in the forums: "*There are too many trolls in this place.*" The argumentative exchange below shows Student C seemingly baiting Student B:

Student B: Out of curiosity, what exactly are the "scholarly conventions for citing sources, including in-text citations and references" that you employed? That doesn't look like any school of citation that I'm familiar with.

Student C: Dear Sir, I am not here to feed polemics. If you are familiar with other schools of citation, then please kindly show them to me. If you just have to add pressure and provoke people, you can avoid it. … So have the best day of your life and excuse me if I don't answer anymore to any provocative comment, I have really a lot of things to do."

Student B: I think that the main problem here is that despite the fact that you say you don't want to feed polemics, you're literally creating them where there are none. I merely asked what scholarly conventions you employed. Excuse me for assuming you actually had employed any when you throw a public temper tantrum in response to someone quite neutrally saying you hadn't.

Student C: unless you cannot suggest me any official page that can help me to become better in my works, please don't write me or contact me anymore and if possible let's avoid also the red arrows, as they are quite a stupid way to express one's disappointment, according to me. I hope this time I was clear enough, please don't answer to me.

Student B: I'm still confused about your first warning? I seriously don't understand why you are so venomous towards me. … Why [Student B], are you so angry…?

Negativity and Peer Feedback

Peer feedback was a central element of EC and included highly structured rubrics and scaffolding based on peer feedback literature (Mory, 2003; Topping, 1998; Yang, Badger, & Yu, 2006). According to qualitative coding of peer feedback, peer feedback was generally constructive or complimentary (97%), with only 3% being unconstructive (Comer & Canelas, 2014, p. 3). Still, literature shows that students can be reluctant to acknowledge peers as authorities (Gielen, Peeters, Dochy, Onghena, & Struyven, 2010; Hanrahan & Isaacs, 2001; Strijbos, Narciss, & Dunnebier, 2010), and this was borne out in EC.

Most negativity related to peer feedback focused on feedback towards revision that students received on drafts (termed formative feedback) rather than

feedback for grading purposes on final versions (termed evaluative feedback): *"This is … not about scores … [I] really wanted FEEDBACK for further improvement. I am totally shocked … regarding feedback."* Despite a course emphasis on the ways in which even *providing* feedback improves one's writing, some learners remained almost exclusively focused on receiving feedback and thereby expressed concerns about peers' capability to provide effective feedback: *"There are many students whose first language is not English, as well as many students who are not experienced enough to comment on another's writing."*

Negativity also emerged in response to peer feedback received, with some learners reporting that it was contradictory (*"[M]y peer feedback has been largely bewildering and contradictory."*), misguided (*"Some people probably do not even know how a good writing piece should look or read. I am disappointed in this peer evaluation portion of the class."*), or rude (*"[My] second peer evaluator was rude to say the least."*). Even though most peer feedback was positive or constructive according to a sample of coded data, the small amount of feedback that did get coded as negative or unconstructive tended to be primarily aimed toward critiquing the writing project's main argument or focus (Comer et al., 2014): (*"[A] mediocre photo from a mediocre website does not constitute good academic/scholarly writing. This is my ninth review. I have seen some compelling photos and paintings. This is not one."*; *"I don't waste my time with reading wikipedia articles in this course."*)

Because writing programs are somewhat vulnerable institutionally, often being composed of contingent faculty who teach what is sometimes construed as a "service course," many in writing studies have concerns over the potential impact of MOOCs on writing programs.

Negativity from Disciplinary Colleagues

Negativity also emerged from disciplinary colleagues (writing program administrators, or WPAs, and writing faculty at other institutions). Because writing programs are somewhat vulnerable institutionally, often being composed of contingent faculty who teach what is sometimes construed as a "service course," many in writing studies have concerns over the potential impact of MOOCs on writing programs. And, although there is considerable research on how to teach writing effectively online (Gibson & Hewett, 2009; Hewett, 2010; Hewett, 2013; Warnock, 2009), many in writing studies also have misgivings about the ability to transfer key aspects of writing pedagogy to the MOOC platform, namely the establishment of a productive community of writers and expert feedback and assessment (Krause & Lowe, 2014). Moreover, because EC had a relatively high enrollment and was the first-ever first-year writing MOOC,[7] it became something of a disciplinary linchpin for concerns, fears, and suspicions about MOOCs and first-year writing instruction.

Disciplinary negativity emerged with particular intensity on the Writing Program Administrator's listserv (WPA-L) in response to a positive post stating that Comer should be commended for a strong MOOC. Over the next four days (March 20-24, 2013), a series of negative posts emerged, focused around the following areas:

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[7] Three other first-year writing MOOCs emerged in the months directly following EC; these were each also awarded separate funding through the Bill & Melinda Gates Foundation: "Writing II: Rhetorical Composing" (Delagrange, S., DeWitt, S. L., Halasek, K., McCorkle, B., & Selfe, C., 2013, Ohio State University and Coursera); "First-Year Composition 2.0" (Head, 2013b, Georgia Institute of Technology and Coursera); "Crafting an Effective Writer: Tools of the Trade" (Barkley, Blake, & Ross, 2013, Mt. St. Jacinto Community College and Coursera).

Negativity about MOOCs' Potential Impact on Higher Education	*Is anyone else concerned about the practicalities of how this will affect the working comditions [sic] of teachers? Of the potential for more de-professionalization of education?* *Heck, health care is too expensive. What about Massive Open Online Clinics … Instead of interacting with patients, doctors can make 5-7 minute video modules on diagnosing various ailments. Groups of patients can diagnose and treat each other.*
Negativity about MOOCs' Potential Impact on Writing Programs	*[W]hether or not the folks at these institutions who are experimenting with MOOCs believe these courses should have bona fide college credit attached to them isn't really the issue. The issue is whether … "The Powers That Be" think that these courses should count for college credit … there is very good reason to be worried, vigilant, and involved in the MOOC madness.* *And what if Comer and others resist? Then some other entity--maybe a for-profit one--just says they'll do it, maybe with the help of some among us who'd like the income.*
Negativity about MOOC Writing Pedagogy	*The mode of teaching I've seen [in Coursera MOOCs] is right out of the 19th century. It's "stand and deliver" lectures on video, quizzes, and tests. There was a writing assignment in [a MOOC I took] and it worked poorly … So unless Comer and [the other writing MOOC developers] are doing something radically different … these courses are DOA.* *There's good data on how online classes like this can work; there isn't good data on MOOCs, largely because they are so new but also because, I am willing to guess, won't work well.* *When I read the intro to the MOOC that welcomed me to a community of 60,000, I felt immediately insignificant in such a mass of students.* *I just got a nice email [announcement] from Comer thanking me for sharing my experiences and saying she is "learning so much about you as writers." She also apologizes if I didn't get any response from other students on my first essay. … The letter is a marvelous feat of rhetoric … "Thanks for writing the essay even though I probably haven't read it and maybe nobody has." … [T]his is a writing course where feedback … is 100% from other students, and 0% from any teacher. Now I'm going to write my "I am a Writer" essay, not that I have that much to say. Should I make up a bunch of stuff?*
Negativity about MOOC Power Structures	*Why have MOOCs been underwritten by so much conservative money? Why are huge MOOC efforts being produced by private universities such as Duke? It's further to shunt the poor into defunded public educational institutions and into uneducational learning. The rich will continue to send their offspring to private colleges, where they will continue to get small classes with F2F instruction and graduate into good and influential jobs.*

Disciplinary negativity culminated with a post containing graphic sexual violence: "*There's a picture going the Facebook rounds that pretty well expresses my sense of the Duke MOOC.*" The post contained an attachment of an image of a man starting a chainsaw aimed at his own groin and carrying the caption, "Remember that time you forgot to think?"[8]

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[8] This post, along with the attached image, is available through the WPA-L archive (https://lists.asu.edu/cgi-bin/wa?A0=WPA-L), post #139392, 21 Mar. 2013. The

Impacts of Negativity on Instructor

The abundance of negativity from course learners and disciplinary colleagues left the instructor by turns exhausted, frustrated, defeated, and anxious. The disciplinary negativity left her feeling largely alienated from her discipline and its members. The instructor disengaged, drastically reducing her discussion forum participation: during Weeks 1-4, Comer posted 42 times, but between weeks 5-12 Comer posted only four times, one of which was after the course ended. In other educational contexts, negativity can prompt reflection and, where needed, change and improvement to pedagogy and course design. For this instructor, facing an abundance of negativity due to the scaled nature of a MOOC, and unable to rapidly make substantive course changes in response since the course was already developed, the negativity had a substantial impact and prompted significant instructor disengagement.

Case Study #2

In the second case study, we discuss negativity in Baker and Wang's MOOC, Big Data in Education (October - December, 2013, Columbia University), also taught through Coursera. This course had a total enrollment of over 48,000 at the termination of the course (additional students continued to enroll even after the course concluded – over 17,000 at the time of this writing). "Completion" in the course was pre-defined as earning an overall grade average of 70% or above, the grade required to receive a certificate. The overall grade was calculated by averaging the six highest grades extracted out of a total of eight assignments. For each assignment, students were allowed multiple attempts, with the exact number of attempts varying per assignment. All the assignments were automatically graded, composed of multiple-choice questions and short numerical answers. A total of 638 students completed this online course.

The production of this MOOC was coordinated between three parties: the teaching staff, the university video production team, and the course platform coordinators. The teaching staff consisted of the professor, a teaching assistant, and members from the professor's lab. Unlike some MOOCs produced in a studio with a full production team, this MOOC was recorded by the professor with a personal computer and webcam. After the recording was completed, the university production team edited the videos according to standards set by the course platform provider. Thereby, the major responsibilities of creating the course materials including the course videos, lecture slides and assignments, fell on the shoulders of the teaching staff, primarily the course instructor, leading to relatively high time and effort for the instructor.

Another unusual aspect of this course resides in direct faculty participation in the discussion forums within the course platform. Although faced with a student body of over 48,000, the course instructor checked the discussion forums almost on a daily basis and answered a considerable number of student inquiries, posting or commenting 430 times over the 8 weeks of the course. Student reactions to the course were—as with Comer's class—largely positive, with an overall average rating at the end of the course of 2.91 on a scale of 1-4. However, there was—as with Comer's class—a subgroup of students who made negative posts towards the instructor. This was particularly frequent when the instructor attempted to directly address student concerns.

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image used in the post is available through the website "We Know Memes" at the following url: http://weknowmemes.com/2013/01/remember-that-time-you-forgot-to-think/

Negativity toward Course Platform

In the examples shown below, one student complained about features of the course and their impact on course quality, and when the instructor responded, another student responded in a negative fashion. Though this negativity was focused on the instructor, these criticisms were more relevant to the platform and the process of course creation. Lecture videos were recorded under a tight time frame with coordination among three administrative teams, making it infeasible to rapidly redo videos based on student feedback.

Instructor: "I appreciate the feedback on pauses between slides. I don't actually edit my own videos (Very few Coursera instructors do, if any), but I'll pass the feedback on to the video editors when I talk to them. More than half the class videos have already been created, though (also a standard practice on Coursera - it takes hours to make each video)."

Student H: "You might want to advise Coursera to improve on that. Coursera should do a better job in quality control when accepting courses, some of which are prepared not very well and are not flexible enough to make improvements suggested by learner feedback."

Similarly, another example shown below referred to support within the course platform; the instructor was unable in the platform to design quizzes that could accept answers by a range rather than exact answer, and received hostility from a student because of that. These posts were seen by the instructor as stressful and upsetting, making him not want to read the forums, particularly posts where the names of frequently negative students were present. Although the instructor continued to read and post to the forums, many colleagues commented that the instructor was clearly upset by the forums, and suggested that the instructor quit reading them.

Instructor: "Sorry for the confusion. It's hard to be precise about things like this. I wish there was an easy way in Coursera to set up quizzes that aren't finicky about this.

Student H (same student as previous example): "According to the Honor Code for Instructors, you are supposed to either make yourself knowledgeable about Coursera's technical possibilities to define format options of answers, or to urge Coursera to provide such format options deemed necessary to be able to offer user-friendly course."

One interesting aspect of some students' negative posts was that they were not just upsetting to the instructor, they were also irritating to other students. Many negative posts received a substantial number of "down votes," a rating feature of the Coursera forum. For example, the last comment made by Student H in the example immediately above received multiple down votes from other students, and was in fact tied for the lowest-rating post in the entire course. This suggests that negativity is not just seen as a problem by instructors, but by other students as well. Student H was by far the most negative student in the course, repeatedly posting negatively, and continuing to do so even after receiving extensive public criticism from other students.

As with the previous two examples, the last comment in the example shown below also received multiple down votes from other students. Student I offered a solution to a previous student inquiry, followed by the instructor's encouragement. However, Student J expressed negativity toward the instructor's positive response in a post criticizing the video (the video had skipped a step in the process, which Student I discussed). This post by Student J was the other post tied for the lowest-rated post in the course. Again, completely redoing the video on

short notice was not feasible with the support available for the MOOC. Even a much more extensively supported MOOC than this MOOC would find it difficult to match this student's expectations; it would essentially require full-time individuals able to drop all other tasks to immediately re-design and re-shoot videos.

Student I: (Addressed to another student's question): "You need to go through the entire import data wizard in order for the data to be imported and then the variables will appear in the drop down…"

Instructor: "[Name], good call. That's exactly correct."

Student J: "Why don't you repair the glitch in your video, @[Baker]? It matters more to us than just praising the good student."

Negativity toward Instructor

Even very small changes can be picked up by students. In a traditional classroom with a class size of around 20, it is rare to see students make public comments on a teacher's clothing style even if they do have opinions. By contrast, in the MOOC course setting, the sheer number of students almost guaranteed that any minute differences would be singled out. Therefore, the instructor in a MOOC setting is often seen under scrutiny comparable to a public figure, but without a comparable support team. Sutton and Galunic (1996) argue that the scrutiny experienced by public figures can cause distractions that undermine the quality of work via cognitive overload. Students made fun of the instructor's fashion choices and style throughout the course. While this amused rather than bothered the instructor, it did become a topic of discussion in meetings with colleagues, becoming a distraction from other, more important topics.

> *Student G*
> *Baker is a dedicated teacher and even records video lectures while incarcerated. (At least it looked like an orange prison jumpsuit in the week 7 and 8 videos… I'd like to think he got into an altercation with a colleague over over-fitting a model, but it was probably due to having a sugary caffeinated drink over 16 oz on the streets of New York City…)*

Negativity toward Course Content

There was also negativity towards the course goals and content, with many students without any background in the area claiming that they were the target audience and were not being served by the difficult content in the course. One example is given below. This was a surprise to the instructor; the course was designed as an upper-level graduate course and had pacing and content moderately lighter than the instructor's regular graduate course. The course was explicitly targeted to advanced students, and the course description said so. However, many students expected a course targeted at an introductory or undergraduate level, and complained about the course's pace and content. Other learners complained that the course was too slow, or insufficiently mathematical. In general, creating and supporting a course for a range of learners is a difficult challenge throughout the educational system but even more so for a MOOC that anyone can sign up for.

> *Student K*
> *I've taken several MOOCs, and this is pretty awful so far, not because the topic is bad, or that the instructor isn't knowledgeable, but because I'm not sure professor Baker knows who he is teaching to, or for what.*

Overall, there was relatively little negativity between students in this course, and much of it involved disagreements over negative posts towards the instructor. This difference from Comer's class may be due to the relatively lower degree of required interaction between students. Most of the between-student interactions in Baker and Wang's class involved discussion of the material from a position of equality, not from a position of one student grading the other student.

Disproportionate Sources of Negativity

Among consistent forum contributors, nine participants displayed repeated negativity toward the instructor. Although these numbers represent a tiny percentage of over 48,000 registered students, they accounted for a disproportionate number of negative comments. A small number of outspoken students can create a substantial negative influence on a course.

Of these nine consistently negative individuals, four also responded to a pre-course survey on their motivations (cf. Wang & Baker, 2015). This rate of response (44.44%) was statistically significantly higher than the rest of the class's response rate (2.9%), $\chi^2(df=1)= 55.31$, $p<0.0001$(Wang, Paquette, & Baker, 2014). Interestingly, all of the consistently negative students appeared to be male (according to either the pre-course survey or their choice of name on the forums).

Somewhat unexpectedly, no motivational survey items differentiated the negative students from the remainder of the class to a statistically significant degree, including survey items on academic efficacy, goal orientation, and completion confidence.

Discussion

The case studies presented here demonstrate the multifaceted nature of negativity in MOOCs and the importance of finding ways to mitigate negativity and support instructors who experience it in their courses. Significantly, much of the negativity encountered during the courses is related to elements of course design inherent in the platform or related to design choices made prior to the beginning of the course. Most of the labor and instructional time from an instructor occurs prior to a MOOC's launch, leaving the instructor with limited capability to make changes that can help address this source of negativity during the course itself. This suggests that managing negativity should be integrated into the process of course design and development—perhaps with an eye towards creating design principles for next-generation MOOCs that reduce negativity and mitigate its effects. It is important to note that there are some positive informational aspects to negativity; it is not necessarily optimal (or possible) to eliminate negativity entirely, but it is important to reduce the degree to which it produces the instructor disengagement seen in many MOOCs.

A small number of outspoken students can create a substantial negative influence on a course.

One factor which may have increased the degree of negativity and limited the potential for response by the instructor or other course (or platform) staff was the open nature of the MOOC, where students did not have to pay money and were not attempting to obtain course credit leading toward earning a degree. Some degree of the negativity seen here may be particular to MOOCs; in a regular course, a disruptive or abusive student could ultimately be removed from the course or referred to university disciplinary authorities. In addition, the instructor's ability to assign grades in a traditional course likely restrains student negativity to some degree. Even if an instructor removed a student from a course, in an open MOOC there would be little to prevent the student from creating a new identity (a "sock puppet"), rejoining the course, and resuming the negative behavior. As such, instructors in MOOCs have considerably fewer options for dealing with negativity than instructors in for-credit online courses.

That said, while some aspects of the design of MOOCs may amplify the problem of negativity, negativity can emerge in any discussion forum, and is a well-known phenomenon on all types of discussion forums (Chen et al., 2011; Lee, 2005). Discussion forums have become an increasingly prominent part of for-credit online courses, and participation in these forums is strongly connected with student performance (e.g., Romero, López, Luna, & Ventura, 2013). Similarly, instructor presence in discussion forums has been recognized as a significant factor influencing course effectiveness (Mandernach, Gonzales, & Garrett, 2006). As such, research on how negativity emerges and how it affects instructors—particularly when it can lead to instructor disengagement—is important to pedagogical contexts beyond just MOOCs. Lessons learned from these two MOOCs can be beneficial to instructors of other online courses in managing existing and anticipated negativity. Negativity is not unique to MOOCs, but it is more prominent there, creating more opportunities to observe it, understand it, and ultimately remedy it—lessons that can be adapted to for-credit online learning contexts as well.

Based on these two case studies, we propose the following recommendations for those involved in online learning so they can better understand, manage, and respond to negativity:

Appreciate the impact of scale on negativity. While faculty are likely used to a certain amount of negativity in their own classes, whether online or face-to-face, the scaled nature of negativity in a MOOC context, with the confusion, the continual complaints (even if coming from a minority of students), and the degree of negativity expressed, can generate an impression of overwhelming, pervasive dissatisfaction—even if the majority of active students are in fact satisfied. This is likely to be part of why negativity can have a disproportionate impact. Even in non-MOOC learning contexts, the aggregated impact of negativity over time or alongside other negativity a person might be concurrently experiencing (even if unrelated to the course itself) might yield a similar perception of scale and thereby contribute to the outsized impact negativity can have on instructors and learners.

Prepare instructional and development teams for negativity in discussion forums. There will be negativity in the forums, and there are likely to be several individuals in each MOOC who engage in forms of trolling or flaming (Student H from case study 2 in fact boasted on the forum of having brought his unique perspective to several MOOCs.). Completely eliminating negativity is probably infeasible, and it is impossible to avoid entirely since negativity can appear suddenly in previously positive threads. As discussed above, it is not feasible to remove negative individuals from a MOOC completely; they can simply create a new "sock puppet" identity and re-register. Still, there may be approaches to reducing negativity and mitigating its impacts. One option would be to place problematic individuals in a sub-community within the course, as happens in online gaming with negative or abusive individuals. In this situation, these individuals are only allowed to interact with other negative or abusive individuals, and the instructor and other students do not receive their posts. Another option involves MOOC providers dedicating staff time to visit forums and take responsibility for platform limitations, or even defend instructors when appropriate. This has the potential to create a shared community experience and some measure of solidarity, which may reduce negativity's impact on instructors. The experience of solidarity may be more important than simply defending the instructor.

Understand what contextual factors might make some learners more prone to negativity. MOOCs remain a new experience in many ways, for learners and instructors. Many MOOC learners are unfamiliar with the platform, online learning, and perhaps with higher education and discipline-specific knowledge. Some may be what David Mathew (2014) terms a "Fragile Learner": one who is struggling, anxious, inclined to quit, and less motivated than other

learners. Moreover, MOOCs create an intercultural environment; within intercultural environments, the nuances of interaction, especially in an online platform, can be tricky, leading to negativity or the appearance of negativity. This context suggests that instructional teams should anticipate negativity by integrating supporting strategies and resources well in advance rather than addressing problems as they arise. Resources should therefore be integrated as part of mandatory course content rather than on an as-needed, participant demand basis. Since many MOOCs rely on peer assessment, which can elicit negativity, it may be useful to educate learners on the value of peer feedback by introducing them to research attesting to its value and by providing instructional content designed to help writers learn how to make productive use of feedback (even contradictory feedback) (Bangert-Drowns, Kulik, Kulik, & Morgan, 1991).

Prepare instructional and development teams for negativity from disciplinary colleagues. Colleagues in disciplines may evidence negativity toward MOOCs. Some of this discipline-based negativity may involve concerns unique to a particular discipline, as in the case of writing pedagogy, or it may involve concerns about MOOCs and higher education more broadly. Since MOOCs at this point pose, or at least provide a sense of, a disruption to higher education, and since members of MOOC instructional teams occupy a visible presence within this disruption, those involved with teaching MOOCs should be prepared to experience disciplinary-based negativity from colleagues, and should be prepared to engage in productive conversations with colleagues about the history, implications, promises, and challenges of MOOCs in general. More broadly, those involved with other potentially disruptive innovations in higher education, online learning, and educational technology might also anticipate and prepare for negativity from disciplinary colleagues.

Create open spaces for the exchange of experiences with negativity. Sharing specific experiences with negativity such as these, and the lessons learned, can help develop support for instructors and adjust their expectations, mitigating the impact of negativity. Doing so enables those who experience negativity to reframe their perceptions of it, and enables others to learn from these experiences, and adapt or otherwise modify their own approaches to negativity. Creating open, ongoing discussions about negativity—in MOOCs and in other online educational contexts—also recognizes that the impact of negativity on instructors and learners is highly variable and cannot always be fully anticipated, reinforcing the idea that opportunities for sharing need to be ongoing.

Search for learning opportunities in negativity. Some instances of negativity are best seen as learning moments, where instructional staff can emphasize what is or is not constructive criticism, explore the complexities of intercultural communication, and highlight the value of civic disagreement and debate in academic contexts. In addition, negativity is often combined with input by instructors and the developers of platforms, which can and should be distilled to improve future iterations of the course.

Conclusion

Negativity is a challenge and a problem for online learning environments such as MOOCs. While its full causes and impacts are not yet known, it appears to negatively impact instructors, in some cases out of proportion with its overall frequency of occurrence. In this paper, we present two case studies on negativity in MOOCs, and discuss ways to better support instructional and development teams in anticipating and responding to negativity. As such, it is underscored that anticipating negativity well in advance would avail instructors to better develop practices and mitigate negative impact on both instructors and students. Developing practices that respond more effectively to negativity will benefit many

involved with MOOCs, including faculty members who are about to start teaching on MOOC platforms, especially as more institutions are adopting the MOOC as a teaching platform (Shah, 2014). By reducing the problematic impacts of negativity, we can better maintain instructor and student engagement, potentially leading in the long term to greater satisfaction with the MOOC experience for both instructors and learners, and thereby move toward improving retention and outcomes for both of these groups. Furthermore, the lessons learned from MOOC negativity can also benefit instructors and learners in for-credit online learning contexts as they seek to understand, respond to, and manage negativity as a means of strengthening online instructional experiences and outcomes.

References

Baker, R., & Wang, Y. (2013). *Big data in education*. Retrieved from https://www.coursera.org/course/bigdata-edu

Bangert-Drowns, R., Kulik, C. L. C., Kulik, J. A., & Morgan, M. (1991). The instructional effect of feedback in test-like events. *Review of Educational Research, 61*(2), 213-238. doi:10.2307/1170535

Barkley, L., Blake, T., & Ross, L. (2013). *Crafting an effective writer: Tools of the trade (fundamental English writing)*. Retrieved from https://www.coursera.org/course/basicwriting

Baumeister, R. F., Bratslavsky, E., Finkenauer, C., & Vohs, K. D. (2001). Bad is stronger than good. *Review of General Psychology, 5*(4), 323-370. doi:10.1037//1089-2680.5.4.323

Bazarova, N. N., & Walther, J. B. (2009). Attribution of blame in distributed groups. In P. Lutgen-Sandvik & B. Davenport Sypher (Eds.), *The destructive side of organizational communication: Processes, consequences, and constructive ways of organizing* (pp. 252-266). Mahwah, NJ: Routledge.

Blix, A. G., Cruise, R. J., Mitchell, B. N., & Blix, G. G. (1994). Occupational stress among university teachers. *Educational Research, 36*(2), 157-169. doi:10.1080/0013188940360205

Brinton, C. G., Chiang, M., Jain, S., Lam, H., Liu, Z., & Wong, F. M. F. (2013). Learning about social learning in MOOCS: From statistical analysis to generative model. *IEEE Transactions on Learning Technologies, 7*(4), 346-359. doi:10.1109/TLT.2014.2337900

Carver, L., & Harrison, L. M. (2013). MOOCs and democratic education. *Liberal Education*, *99*(4), 20+. Retrieved from http://go.galegroup.com.proxy.lib.duke.edu/ps/i.do?id=GALE%7CA352376676&v=2.1&u=duke_perkins&it=r&p=AONE&sw=w&asid=199095321a497d7aa573fa84500fd32b

Chen, C., Wu, K., Srinivasan, V., & Zhang, X. (2011). Battling the Internet water army: Detection of hidden paid posters. *arXiv*:1111.4297. Retrieved from http://arxiv.org/abs/1111.4297

Cheng, C. K., Paré, D. E., Collimore, L. M., & Joordens, S. (2011). Assessing the effectiveness of a voluntary online discussion forum on improving students' course performance. *Computers & Education*, *56*(1), 253-261. doi:10.1016/j.compedu.2010.07.024

Christensen, C. M. (1997). *The innovator's dilemma: When new technologies cause great firms to fail*. Boston, MA: Harvard Business School Press.

Clow, D. (2013, April 10). MOOCs and the funnel of participation. In D. Suthers (Ed.). *LAK 2013: Third international conference on learning analytics and knowledge: 8-12 April 2013*. Paper presented at The Third Conference on Learning Analytics and Knowledge (LAK 2013), Leuven, Belgium, 8-12 April (pp.185-189). New York, NY: ACM. doi:10.1145/2460296.2460332

Comer, D. (2013). *English Composition I: Achieving Expertise*. Retrieved from https://class.coursera.org/composition-001

Comer, D. (2013, November 11). *Five tips for learning online*. Retrieved from https://www.youtube.com/watch?v=pjDQRgtblVE

Comer, D. (2014). Learning how to teach … differently: Extracts from a MOOC instructor's journal. In S. Krause & C. Lowe (Eds.), *Invasion of the MOOCs. The promise and perils of massive open online courses* (pp. 130-149). Anderson, SC: Parlor Press, 2014.

Comer, D., Clark, C., & Canelas, D. (2014). Writing to learn and learning to write across the disciplines: Peer-to-peer writing in introductory-level MOOCs. *IRRODL, 15*(5), 26-82. Retrieved from http://www.irrodl.org/index.php/irrodl/article/view/1850

Comer, D., & Canelas, D. (2014). *MOOC research initiative final report.* Retrieved from http://www.moocresearch.com/reports

Comer, D., & White, E. M. (in press). Adventuring into MOOC writing assessment: Challenges, results, and possibilities. *College Composition and Communication*.

Coviello, L., Sohn, Y, Kramer, A. D, Marlow, C., Franceschetti, M., Christakis, N. A., & Fowler, J. H. (2014). Detecting emotional contagion in massive social networks. *PloS ONE, 9*(3), 1-6. doi:10.1371/journal.pone.0090315

Culpeper, J. (2010). *Impoliteness: Using language to cause offence*. Cambridge, England: Cambridge University Press.

Daniel, J. (2012). Making sense of MOOCs: Musings in a maze of myth, paradox and possibility. *Journal of Interactive Media in Education, 2012*(3). doi:10.5334/2012-18

Danneels, E. (2004). Disruptive technology reconsidered: A critique and research agenda. *Journal of Product Innovation Management, 21*(4), 246-58. doi:10.1111/j.0737-6782.2004.00076.x

Davidson, C. (2013, April 29). Peer learning, online learning, MOOCs, and me: Response to *The Chronicle of Higher Education*. Retrieved from http://www.hastac.org/blogs/cathy-davidson/2013/04/29/peer-learning-online-learning-moocs-and-me-response-chronicle-higher

Delagrange, S., DeWitt, S. L., Halasek, K., McCorkle, B., & Selfe, C. (2013). *Writing II: Rhetorical composing*. Retrieved from https://www.coursera.org/course/writing2

Draeger, J. (2013). Why bother with the scholarship of teaching and learning? *InSight*, *8*, 12-19.

Franco, R. T. (2014). What is Moocstream? Retrieved from http://moocstream.blogspot.com/2014/03/what-is-moocstream.html#.U7D14KuG1y8

Freedom, D. (2013, September 11). MOOC, learn, repeat? Retrieved from http://degreeoffreedom.org/mooc-learn-repeat/

Fredrickson, B. L., & Losada, M. F. (2005). Positive affect and the complex dynamics of human flourishing. *American Psychologist, 60*(7), 678-686. doi:10.1037/0003-066X.60.7.678

Gaigher, S. (2014). The predictive value of disruptive technology theory for digital publishing in the traditional publishing environment: A South African case study. *Journal of Scholarly Publishing, 45*(3), 261-288. doi:10.1353/scp.2014.0010

Gibson, K., & Hewett, B. (Eds.). (2009). *Annotated bibliography CCCC committee for best practices in online writing instruction.* Retrieved from http://www.ncte.org/library/NCTEFiles/Groups/CCCC/Committees/OWIAnnotatedBib.pdf

Head, K. (2013a). *First-year composition 2.0*. Retrieved from https://www.coursera.org/course/gtcomp

Head, K. (2013b). Lessons learned from a freshman composition MOOC. *The Chronicle of Higher Education*. Retrieved from http://chronicle.com/blogs/wiredcampus/lessons-learned-from-a-freshman-composition-mooc/46337

Head, K. (2014). The hidden costs of MOOCs. In S. Krause & C. Lowe (Eds.), *Invasion of the MOOCs. The promise and perils of Massive Open Online Courses* (pp. 45-55). Anderson, SC: Parlor Press.

Hewett, B. (2010). *The online writing conference: A guide for teachers and tutors*. Portsmouth, NH: Heinemann.

Hewett, B. (2013). Initial report of the CCCC committee for best practice in online writing instruction (OWI). The state-of-the-art of OWI. Retrieved from http://www.ncte.org/library/NCTEFiles/Groups/CCCC/Committees/OWI_State-of-Art_Report_April_2011.pdf

Hogan, R. L., & McKnight, M. A. (2007). Exploring burnout among university online instructors: An initial investigation. *The Internet and Higher Education*, *10*(2), 117-124. doi:10.1016/j.iheduc.2007.03.001

Hollands, F. M., & Tirthali, D. (2014). MOOCs: Expectations and reality. Full report.
Center for Benefit-Cost Studies of Education, Teachers College, Columbia University,
NY. Retrieved from http://cbcse.org/wordpress/wpcontent/uploads/2014/05/MOOCs_Expectations_and_Reality.pdf

Jordan, K. (2013). MOOC completion rates: The data. In *katy.jordan.com*. Retrieved from http://www.katyjordan.com/MOOCproject.html

Kanuka, H. (2010, May 17). Culturally diverse communication through communication technologies: A Canadian viewpoint. In Z. Abas, I. Jung, & J. Luca (Eds.), *Proceedings of Global Learn 2010.* Paper presented at Global Learn Asia Pacific 2010: Global Conference on Learning and Technology, Penang, Malaysia (pp. 3798-3803). Chesapeake, VA: Association for the Advancement of Computing in Education. Retrieved from http://www.editlib.org/p/34474

Kensinger, E. A., & Corkin, S. (2003). Effect of negative emotional content on working memory and long-term memory. *Emotion, 3*(4), 378–393. doi:10.1037/1528-3542.3.4.378

Kolowich, S. (2013a). Professor leaves a MOOC in mid-course in dispute over teaching. *The Chronicle of Higher Education.* Retrieved from http://chronicle.com/blogs/wiredcampus/professor-leaves-a-mooc-in-mid-course-in-dispute-over-teaching/42381

Kolowich, S. (2013b). The professors who make the MOOCs. *The Chronicle of Higher Education, 59*(28), pp. A20-A23.

Kop, R., Fournier, H., & Mak, J. S. F. (2011). A pedagogy of abundance or a pedagogy to support human beings? Participant support on Massive Open Online Courses. *The International Review of Research in Open and Distance Learning, 12*(7), 74-93. Retrieved from http://www.irrodl.org/index.php/irrodl/article/view/1041

Kouzmanoff, A. (2014). An interview with Professor Michael Goldberg, instructor of "Beyond Silicon Valley: Growing entrepreneurship in transitioning economies." Retrieved from http://press.coursetalk.com/post/88663459155/an-interview-with-professor-michael-goldberg

Kramer, A. D., Guillory, J. E., & Hancock, J. T. (2014). Experimental evidence of massive-scale emotional contagion through social networks. *Proceedings of the National Academy of Sciences of the United States of America, 111*(24), 8788-8790. doi:10.1073/pmas.1320040111.

Krause, S. D., & Lowe, C. (Eds.). (2014). *Invasion of the MOOCs: The promises and perils of Massive Open Online Courses.* Anderson, SC: Parlor Press.

Lackritz, J. R. (2004). Exploring burnout among university faculty: Incidence, performance, and demographic issues. *Teaching and Teacher Education, 20*(1), 713-729. doi:10.1016/j.tate.2004.07.002

Lee, H. (2005). Behavioral strategies for dealing with flaming in an online forum. *The Sociological Quarterly*, *46*(2), 385-403. doi:10.1111/j.1533-8525.2005.00017.x

Lenox, M. (2014, January 9). 'More' not 'or': Fear and loathing the world of MOOCs. *Forbes.* Retrieved from http://www.forbes.com/sites/darden/2014/01/09/more-not-or-fear-and-loathing-the-world-of-moocs/

Mandernach, B. J., Gonzales, R. M., & Garrett, A. L. (2006). An examination of online instructor presence via threaded discussion participation. *Journal of Online Learning and Teaching*, *2*(4), 248-260.

Mathew, D. (2014). The internet is unwell … and will not be at school today: Oppositions, omissions and online anxiety. *InSight, 9,* 9-27.

McGuire, R. (2014). The best MOOC provider: A review of Coursera, Udacity, and Edx. Retrieved from http://www.skilledup.com/articles/the-best-mooc-provider-a-review-of-coursera-udacity-and-edx/

McAuley, A., Stewart, B., Siemens, G., & Cormier, D. (2010). The MOOC model for digital practice. Retrieved from www.elearnspace.org

Mory, E. H. (2003). Feedback research revisited. In J. H. Jonassen (Ed.). *Handbook of research on educational communications and technology* (pp. 745-783). New York, NY: MacMillan Library Reference.

O'Sullivan, P., & Flanagin, A. (2003). Reconceptualizing "flaming" and other problematic messages. *New Media & Society, 5*(1), 69–94. doi:10.1177/1461444803005001908

Parr, C. (2013, May 9). MOOC completion rates 'below 7%'. *Times Higher Education*. Retrieved from http://www.timeshighereducation.co.uk/news/mooc-completion-rates-below-7/2003710.article

Parry, M. (2013, September 3). A star MOOC professor defects—at least for now. *The Chronicle of Higher Education*. Retrieved from http://chronicle.com/article/A-MOOC-Star-Defects-at-Least/141331/

Peterson, R. (2014). MOOC fizzles. *Academic Questions, 27*(3), 316-319. doi:10.1007/s12129-014-9434-3

Ramesh, A., Goldwasser, D., Huang, B., Daumé, H., & Getoor, L. (2014) Uncovering hidden engagement patterns for predicting learner performance in MOOCs. Retrieved from http://www.umiacs.umd.edu/~hal/docs/daume14moocengagement.pdf

Rice, R. E., & Love, G. (1987). Electronic emotion socioemotional content in a computer-mediated communication network. *Communication research*, *14*(1), 85-108. doi:10.1177/009365087014001005

Romero, C., López, M. I., Luna, J. M., & Ventura, S. (2013). Predicting students' final performance from participation in on-line discussion forums. *Computers & Education*, *68*, 458-472. doi:10.1016/j.compedu.2013.06.009

Ross, J., Sinclair, C. Knox, J. Bayne, S., & Macleod, H. (2014). Teacher experiences and academic integrity: The missing components of MOOC pedagogy. *MERLOT Journal of Online Learning and Teaching, 10*(1), 57-69. Retrieved from http://jolt.merlot.org/vol10no1/ross_0314.pdf

Shachaf, P., and Hara, N. (2012). Beyond vandalism: Wikipedia trolls. *Journal of Information Science*, *36*(3), 357–370. doi:10.1177/0165551510365390

Shah, D. (2014). MOOCs in 2014: Breaking down the numbers. EdSurge.com. Retrieved from: https://www.edsurge.com/n/2014-12-26-moocs-in-2014-breaking-down-the-numbers

Shirom, A. (2003). Job-related burnout: A review. In J. C. Quick & L. E. Tetrick (Eds.), *Handbook of occupational health psychology* (pp. 245−264). Washington, DC: American Psychological Association.

Siemens, G. (2005). Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology and Distance Learning, 2*(1), 3-10. Retrieved from http://www.itdl.org/Journal/Jan_05/article01.htm

Strijbos, J. W., Narciss, S., & Dunnebier, K. (2010). Peer feedback content and sender's competence level in academic writing revision tasks: Are they critical for feedback perceptions and efficiency? *Learning and Instruction*, *20*(4), 291-303. doi:10.1016/j.learninstruc.2009.08.008
Sutton, R. I., & Galunic, D. C. (1996). Consequences of public scrutiny for leaders and their organizations. In L. L. Cummings & B. M. Staw (Eds.), *Research in organizational behavior*, 18, (pp. 201-250). Greenwich, CT: JAI Press.

Tham, J. (2014). C.08 "MOOCing back to school: A roundtable of professors as students in massive open online courses." Retrieved from http://praxis.technorhetoric.net/tiki-index.php?page=CCCC2014_C08

Thompsen, P. A. (1993, February). A social influence model of flaming in computer-mediated communication. Paper presented at the Annual Meeting of the Western States Communication Association, Albuquerque, NM. Retrieved from https://archive.org/stream/ERIC_ED355572/ERIC_ED355572_djvu.txt

Tomkin, J. H., & Charlevoix, D. (2014). Do professors matter?: Using an a/b test to evaluate the impact of instructor involvement on MOOC student outcomes. *Proceedings of the first ACM conference on Learning @ scale conference.* Paper presented at the *Learning @ scale conference,* Atlanta, GA (pp. 71-78). doi:10.1145/2556325.2566245

Topping, K. (1998). Peer assessment between students in colleges and universities. *Review of Educational Research*, *68*(3), 249-276. doi:10.3102/00346543068003249

Tugade, M. M., & Fredrickson, B. L. (2004). Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of Personality and Social Psychology, 86*(2), 320-333. doi:10.1037/0022-3514.86.2.320

Vygotsky. L. S. (1978). *Mind in society: The development of higher psychological processes.* Cambridge, MA: Harvard University Press.

Walther J. B., Anderson J. F., & Park D. W. (1994). Interpersonal effects in computer-mediated interaction: A meta-analysis of social and antisocial communication. *Communication Research, 21*(4), 460-487. doi:10.1177/009365094021004002

Wang, Y., & Baker, R. (2015). Content or platform: Why do students complete MOOCs? *MERLOT Journal of Online Learning and Teaching*, *11*(1), 191-218.

Wang, Y., Paquette, L., Baker, R. (2014) A longitudinal study on learner career advancement in MOOCs. *Journal of Learning Analytics, 1*(3), 203-206.

Warner, J. (2013, April 22). I'm failing my MOOC. *Inside Higher Ed*. Retrieved from http://www.insidehighered.com/blogs/just-visiting/im-failing-my-mooc

Warnock, S. (2009). *Teaching writing online: How and why*. Urbana, IL: National Council of Teachers of English.

Weissmann, J. (2013, September 8). There's something very exciting going on here. *The Atlantic*. Retrieved from http://www.theatlantic.com/business/archive/2012/09/theres-something-very-exciting-going-on-here/262119/

Wen, M., Yang, D., & Rosé, C. P. (2014). Sentiment analysis in MOOC discussion forums: What does it tell us? *Proceedings of educational data mining*. Retrieved from http://www.cs.cmu.edu/~mwen/papers/icwsm2014-camera-ready.pdf

Wente, M. (2012, February 4). We're ripe for a great disruption in higher education. *The Globe and Mail*. Retrieved from http://www.theglobeandmail.com/commentary/were-ripe-for-a-great-disruption-inhigher-education/article543479/

Whitchurch, C. (2012). Expanding the parameters of academia. *Higher Education*, *64(*1), 99-117. doi:10.1007/s10734-011-9483-2

Willard, N. E. (2007). *Cyber-bullying and cyber-threats responding to the challenge of online social aggression, threats, and distress*. Champaign, IL: Research Press.

Yang, M., Badger, R., & Yu, Z. (2006). A comparative study of peer and teacher feedback in a Chinese EFL writing class. *Journal of Second Language Writing*, *15*(3), 179-200. doi:10.1016/j.jslw.2006.09.004

Appendix

EC Forum Data Coded in March 2014

Data Type	Source Coded
Week 1 Discussion Forum	36 Full Threads, 106 Posts
Week 2 Discussion Forum	35 Full Threads, 289 Posts
Week 3 Discussion Forum	27 Full Threads, 169 Posts
Week 4 Discussion Forum	35 Full Threads, 204 Posts
General Discussion Forum	86 Posts
Top Three Reputation Posters in Discussion Forums: o Student D (539 total posts) o Student E (306 total posts) o Student F (21 total posts)	209 Posts
Peer responses to "I Am A Writer," a 300-word introductory discussion forum post. (Total posts: 8000)	80 Peer Responses
Peer feedback on major writing projects, only the open-ended questions (Total peer feedbacks: 14,682):	342 peer feedbacks provided by 50 unique users.
Final Reflective Essays, only comments about providing and receiving peer feedback. (Total Final Reflective Essays Submitted: 1415).	48 final reflective essays

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Using Technology-Nested Instructional Strategies to Enhance Student Learning

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Students today expect the use of technology in their classes, rather than have to listen to less-than-engaging lectures. College students are connected electronically and incessant technology consumers. As a result, they may prefer the infusion of technologies to help them learn and enjoy the process of learning, rather than having to listen exclusively to lectures. To investigate this, the authors solicited student perceptions to assess the importance of learning through technology-nested instructional strategies. Student perceptions give direction to and affirm the benefits of instructional strategies that increase student motivation to engage more actively in their learning. Based on quantitative and qualitative responses through action research in multiple courses, students perceive their learning as more engaging and enjoyable when technology-nested instructional strategies are infused into their classes.

Accountability for student learning has become the new norm in higher education. While teachers have been recognized as significant determinants in student learning, Bean (2011), Brookfield (2006), Davis (1993), Diamond (2008), McKeachie, Svinicki, and Hofer (2011), and Umbach and Wawrzynski (2005) claimed teachers cannot rely exclusively on class lectures because today's students expect use of technology and engaging activities. Malm and Defranco (2011-2012) concluded, "The next generation of students will not just be concerned about if technology is used, but rather how it is incorporated into the educational experience" (p. 404). Technology will serve as a catalyst to student engagement with content.

Yazedjian and Kolkhorst (2007) argued that unless students were forced to break out of the anonymity and inactivity of large classes, many of them resisted embracing course content and persisted in doing only the minimum. Absent any change, students cheated themselves of opportunities to collaborate with and learn from classmates, improve critical thinking and oral and written communication skills, and prepare more effectively for future jobs requiring interdependence and practical application of knowledge. Incorporating technology-based strategies has become one highly effective approach, especially benefiting visual and interactive instructional strategies, including learning management systems (LMSs), carefully designed slides developed using PowerPoint presentation software, an interactive review game, online blogs, two types of classroom response systems, and video clips. In developing this action research project in several courses, the authors carefully designed, implemented, and reflected on the use of these learning strategies and their impact on student perceptions of their learning.

The purpose of this study was to gather student perceptions of technology-nested learners, for challenging students to engage more actively with course content (DeBourgh, 2008; Patterson, Kilpatrick, & Woebkenberg, 2009).

Review of Literature

This review of literature includes brief descriptions of the use of an LMS, PowerPoint slides, blogs, classroom response systems, and video clips. These technologies have been found to enrich and extend learning and actively engage students.

A university's provision of an LMS along with staff to support its use has encouraged and facilitated faculty members' use of instructional technologies. Malm and Defranco (2011-2012) suggested, however, that this was just the first step.

> With the near-universal adoption of LMS platforms by colleges and universities, the time has come to shift the focus of conversation from *whether* faculty use the LMS to the more difficult and important questions of *how* these systems are impacting the student learning experience. (p. 410)

They also concluded that while these systems have been used pervasively, there was almost no evidence to verify how they were used and whether they impacted student learning.

Debevec, Shih, Mei-Yau, and Kashyap (2006) suggested PowerPoint slides provided a structure for lectures and discussions to help students focus and organize course material. Clark (2008) commented how PowerPoint slides focused students' attention, partially because watching and listening were preferred to just listening. She concluded, "The key element in the use of PowerPoint as a presentation tool is its potential to increase and maintain student interest and attention to the lecture when combined with active teaching and student involvement" (p. 39).

Debevec et al. (2006) reported their students often used an LMS in class preparation and study routines and were not deterred from attending class, compared to students who utilized an LMS less frequently. Slides posted on an LMS allowed students to view them electronically or use printed copies for taking aligned notes during lectures as well as in studying for tests. Clark (2008) also described how PowerPoint slides stimulated interest, improved note-taking, and promoted higher-order thinking (p. 39). As such, students are challenged to engage more deeply with the content by asking and answering questions to construct new knowledge.

In another use of an LMS, students were provided with blog prompts and required to post responses based on their understanding of assigned readings. The best blog prompts, Bean (2011) posited, "require students to respond knowledgeably to some part of course content but then to add their own views and experiences" (p. 209). Student discussions using blogs have been shown to facilitate student learning (Cheng & Chau, 2011). They reported blogs enabled students to learn and expand the meaning of terms, revise co-constructed knowledge, and apply newly co-constructed knowledge in collaborative ways. Also, they found blogs helped students construct knowledge at a higher collaborative level.

Sevian and Robinson (2011) stated that use of a classroom response system, specifically clickers, helped teachers discover students' misconceptions, assess their preparedness, gauge the understanding of concepts, poll opinions to fuel debates, elicit discussion, and identify students who needed additional help. They found use of clickers increased the quality and quantity of participation, promoted learning, provided immediate and accurate feedback about what students did and did not understand, and stimulated critical thinking. DeBourgh (2008) concurred and concluded that increased student participation resulted "in high-level application and synthesis of complex concepts, and supports skill development for advanced reasoning" (pp. 86-87). Additionally, the use of classroom response systems possibly resulted in greater student enjoyment (Stowell & Nelson, 2007) and engagement (Patterson et al., 2009).

Videos have been found to enhance key course content (Wright & Abell, 2011). Hoover (2006) found video clips were learning devices as well as attitude enhancers, especially for first- and second-year students, since many students are visual learners. That is, students remembered more of what they saw than what they heard. Doyle (2008) emphasized how pictures and images helped students remember what they were learning. Hoover (2006) concluded that video clips broke up the monotony of largely auditory lectures and assisted students' understanding of concepts, as long as the teacher offered pre- and postcontextual information to frame key concepts. Cooper and Robinson (2000) supported the benefits of using audiovisual presentations and offered how the effectiveness of using video clips improved when informal discussions were conducted before and after presentations to focus students' attention on the most important points.

Several authors supported the use of technology-nested strategies because they positively impacted student learning. Use of LMS, PowerPoint slides, blogs, classroom response systems, and video clips have been shown across multiple disciplines to engage students more actively and challenge them to think more critically as they learned and constructed new knowledge. But, what do students think about technology-based strategies? Little evidence exists about how students perceive the relationship between technology-based strategies and their learning (Komarraju & Karau, 2008; Lumpkin, Achen, & Dodd, 2015). While engaged students are the ideal, it is difficult to tell, based on body language and unsolicited comments, if students value instructional strategies. Because the authors wanted to have evidence of whether students valued expanded use of technologies in teaching, the purpose of this action research project was to gather student perceptions about whether these instructional strategies benefited their learning. Using the authors' classes as case studies, the authors collected student perceptions of several technology-based strategies in their courses across multiple content areas and levels of students.

...it was determined student perceptions should be sought to support decisions of when to use or not to use technologies to enhance learning.

Method

This work investigated student perceptions of the use of technology-based classroom activities and their perceptions about the impact of these strategies on their learning. A mutual interest in improving and enhancing student learning prompted the evaluation of multiple classroom learning strategies rooted in technology and identification of ways to utilize these strategies. Through this discussion, it was determined student perceptions should be sought to support decisions of when to use or not to use technologies to enhance learning.

Participants

Students in four undergraduate courses and one graduate course were asked to participate in the study by taking an author-designed survey at the end of the fall 2012 semester. One graduate class, taking a required course to complete their graduate degrees in sport management, was surveyed ($N = 27$). A total of 153 undergraduate students across four courses completed the survey. One of the undergraduate courses was an introductory course that was required of students to enter the sport management major. It consisted of mostly freshmen and sophomores; however, students across campus could also take the course as an elective. Another undergraduate course was an upper-level core course for sport management majors and consisted of primarily juniors and seniors. At a second university, sophomores, juniors, and seniors enrolled in a course required for all physical education majors pursing a concentration in health and exercise science

were surveyed. The final course was an elective for upper-class physical education majors as well as a variety of other students.

Materials

Teaching at two universities, the authors used an LMS, PowerPoint slides, one or two classroom response systems, video clips, and an interactive review game. Blogs were designed and implemented by two of the authors. One type of classroom response system, Poll Everywhere, was used by each author, while one also used an additional classroom response system, Lino, with a graduate course.

Numerous learning materials placed on the LMS were designed to facilitate the achievement of student learning outcomes. Students were encouraged to utilize all course materials, and especially the PowerPoint slides, to expand and support understanding of key content.

Blogs encouraged students to complete assigned readings, respond to prompts, and engage in discussions with classmates. Ideally, through blogging, students gained deeper understanding of course material and applied information from assigned readings to practical situations. When using blogs, groups of 6 to 10 students facilitated learning from and with one another. Prompts or questions related to assigned readings posted on the LMS elicited responses from students, who use specific examples from readings to support their responses, contribute new perspectives about topics to the group, and demonstrate critical inquiry in their responses.

Using a template originally developed at Rutgers University, the authors incorporated a technology-based, interactive review game (i.e., Jeopardy-like) in undergraduate courses to help students review for tests. To create each interactive review game, 31 answers and questions were developed. Completion of one review game during class took 20-25 minutes. Students either formed groups or competed individually and were asked to raise their hands prior to responding. Students were required to put away tablets, laptops, and not use their notes. Each author displayed the answers in each category from the lowest to highest point value. If students were in groups, they discussed possible questions and chose their responses or the correct questions to match the answers provided. All students received points if they knew the correct questions. After each interactive review game was used for review, it was made available on the LMS to help students study for tests.

One example of a classroom response system, which unlike clickers cost students nothing, is Lino. The use of Lino, an online canvas service, enabled students to anonymously express opinions and view classmates' responses immediately to help facilitate discussions based on differing perspectives. After opening a Lino account (http://en.linoit.com), questions were developed about issues and posted for viewing during class. Using their smart phones, laptop computers, or tablets, students clicked on a hyperlink for each question provided on the LMS, which opened a Lino canvas with a teacher-initiated question. Students' responses appeared as "sticky notes" on the canvas and were rearranged or grouped by the teacher to facilitate discussions.

Use of Poll Everywhere, an online classroom response or polling tool, enabled real-time responses from students via their smart phones, tablets, or laptop computers. After each of the authors set up a free (which allows 40 responses per question; unlimited responses require a purchase) Poll Everywhere account, questions developed on the Poll Everywhere website allowed students to answer electronically individually or in groups and to view responses immediately. By downloading a free presentation application onto the classroom computer, responses to each question placed on Poll Everywhere and linked directly to PowerPoint allowed real-time responses to appear in a graphic format (for true/false or multiple choice questions) or a scrolling list of open-ended responses. Through Poll Everywhere, students' understanding was assessed, and students' anonymous opinions on controversial issues were solicited.

Video clips were used to enrich and extend student learning through timely and informative visual technology. Professional organizations, media outlets, and commercial videos were searched to obtain video clips to supplement course content. YouTube provided another useful resource, but its use required careful review to ensure quality and appropriateness of content. Links to video clips were embedded within PowerPoint slides, which permitted students to review video clips or view them if absent from class.

Procedure

In conjunction with regular course evaluations, student perceptions were measured through an anonymous, author-designed questionnaire. The questionnaire asked students to respond about the degree (0 = not at all; 1 = sometimes; and 2 = often) of positive impact on their learning for each technology-nested strategy. Additionally, students were asked to record the open-ended comments at the bottom of this questionnaire. A student volunteer collected completed questionnaires in an envelope and returned them to each author, allowing the teacher to be absent during questionnaire completion. Quantitative data and students' qualitative feedback are provided in the results.

Quantitative data from all four undergraduate classes were compiled, and percentages for each learning strategy were calculated as composites. Students' qualitative comments were reviewed by each author and organized by learning strategy. Then, each author reviewed student comments and grouped them based on themes found in students' word choice (for example, fun, interesting, helped me learn). Then all three authors reviewed the comments for reporting. Comments representing each unique student sentiment supporting the quantitative findings were reported.

Results

The study collected quantitative and qualitative data from undergraduate and graduate students to examine which of the technology-nested instructional strategies positively impacted their learning. Over 80% of undergraduate and 88% of graduate students rated each strategy as 'often' or 'sometimes' positively impacting their learning. Students' ratings of each instructional strategy are listed separately in Table 1 for undergraduate and graduate students.

Table 1

Student Ratings of the Impact on Learning of Technology-Nested Instructional Strategies

	Not at All	Sometimes	Often
Undergraduate Student Ratings			
Blogs (*n* = 123)	13%	43%	44%
Interactive Review Game (*n* = 151)	7%	31%	62%
Learning Management System (*n* = 55)	0%	44%	56%
Poll Everywhere (*n* = 149)	17%	53%	30%
PowerPoint Slides (*n* = 55)	0%	2%	98%
Video Clips (*n* = 55)	2%	44%	55%
Graduate Student Ratings			
Learning Management System (*n* = 27)	4%	37%	59%
Lino (*n* = 26)	12%	42%	46%
Poll Everywhere (*n* = 27)	4%	59%	37%

PowerPoint Slides (*n* = 27)	11%	33%	56%
Video Clips (*n* = 27)	0%	15%	85%

Note: Undergraduate N = 153; Graduate N = 27

Students also provided open-ended comments about their perceptions of the technology-nested instructional strategies (see Table 2). Comments are organized by learning strategy and undergraduate and graduate students.

Table 2

Students' Comments about Technology-Nested Instructional Strategies

<div align="center">Undergraduate Students' Comments</div>

Learning management system
- "Helped me learn the material more"

Slides developed using presentation software
- "Because it clearly explains what everything is and so they were very helpful to refer to when I was uncertain about something"
- "They summarized the information clearly and concisely and helped me study effectively"
- "The way I learned the best in combination with you lecturing"

Group blogs
- "Although I didn't like doing them they were pretty helpful"
- "Forced us to read articles and articulate thoughts and concepts"
- "Helped incorporate the readings"
- "Because they really didn't come up on the tests and were more for making sure you actually read. I still learned a lot from the blogs and they were informational"
- "Forces you to do the reading and critically think on the topic"
- "They were difficult, but doesn't mean I didn't learn from them"
- "I liked the weekly engagement in real world situations"
- "It displayed real world application on perspective for the topics"
- "It required you to comprehend as well as analyze new material every time"
- "Had to read article to understand, help me learn"
- "Because they were usually helpful article[s] and it helped understanding them by writing about them"
- "It helped me to talk and understand the readings"
- "They made you apply what you learned"
- "While doing the reading made you pay better attention"

Jeopardy
- "Class involvement and learned"
- "Helped with review"
- "Because it was a fun way to review for the tests"
- "Something fun but still learned from it"
- "Helped me learn and know what was important"
- "Actually integrated material helped learn. Posting on Blackboard helped as well"
- "I thought they were a very beneficial review"
- "Help learn, more relaxed"
- "They were entertaining but were still learning"
- "Fun way to review as class"
- "Quizzing us on info and having fun with it was helpful"
- "Fun because the questions were straightforward and I know I needed to know them in order to do well on tests"
- "It was fun and easy way to study"
- "Helped me put all we learned into something fun, made it easier for me to

learn"
- "It helped us understand what was the most important information and what you (i.e., professor) thought was important"
- "It got the class to interact and work together"
- "Because I like the competition aspect of the game"
- "Helpful before exams. Involved the whole class"
- "They were questions based on what she taught us, therefore, made the test easier and less stressful"

Poll Everywhere
- "Those were fun because you got the other people's response"
- "It was fun, interactive, and useful"
- "I like the interactive part of class"
- "Interesting to see what everyone else is thinking"
- "Was interesting to anonymously vote or poll on information then discuss preferences, usually was funny"

Video clips
- "The clips are fun and easy to watch"

Graduate Students' Comments
Learning management system
- "Concrete learning with topical research"
- "Course material well-selected and gave well-rounded understanding"

Slides developed using presentation software
- "Well-done, made issues clear"

Lino
- "Funny to see different responses and discussion was good"
- "Interactive learning, made class more interesting"
- "Able to see others thoughts and opinions"

Video clips
- "Real life experiences/examples"
- "I'm a visual learner"
- "Real world examples that we can apply"
- "Nice to hear what experts say on popular subjects"

An examination of the comments made by undergraduate students suggested they found the use of technology-nested strategies enjoyable and beneficial to their learning. They commented positively on the use of an LMS and PowerPoint slides, stating these helped them learn more and improved the clarity of the material. Additionally, students' comments about blogs, another strategy facilitated on the LMS, suggested students found them helpful in the learning process by making them read, think critically, and apply what they learned. With regard to interactive review games, undergraduate students believed their use increased peer interaction during class, helped them understand what material was most important, and allowed them to enjoy class. Students' comments about the use of Poll Everywhere emphasized the importance of learning from classmates and interactivity in class. Also, students appreciated the use of videos in class because it gave them real-world examples and kept their attention.

From a positive perspective, students appreciated the convenient, easy access to a fully developed LMS…

Graduate students perceived that in-class technologies enhanced the learning environment by giving them a clearer picture of course concepts and helping them learn even outside of class. Specifically, graduate students perceived the use of Lino positively, stating it allowed for interaction and its uniqueness held their attention. Finally, graduate students felt that videos provided examples that expanded on key content and engaged them during class.

Discussion

While research in teaching and learning has discussed the impact of technology-based strategies on learning from the teacher's perspective, students' evaluations of these strategies are lacking. Student perceptions are valuable for evaluating learning strategies because students who enjoy learning will learn more (Komarraju & Karau, 2008). The purpose of this study is to examine student perceptions of the use of technology-nested learning strategies and determine if students' believe they learn more when these strategies are used as current literature suggests that they do.

Learning Management System

LMSs on college campuses are ubiquitous, with millions of dollars dedicated to supporting faculty members' and students' use of these systems. As Malm and Defranco (2011-2012) questioned, however, are these systems impacting student learning? Students provided qualitative and quantitative evidence that they believed the LMS and other technologies helped enhance their learning. From a positive perspective, students appreciated the convenient, easy access to a fully developed LMS, many preferred to use course materials posted on the LMS to learn on their own time and individual pace. This should encourage faculty members to take the time to organize course materials and post them online so students can easily find information outside of class. It is important to note, however, that one possible negative about using an LMS could occur if students rely too heavily on their teachers to provide everything relative to the course, such as lecture notes and review questions and answers, making students feel they do not have to attend class to achieve passing grades. This further illustrates the need to engage students in class and challenge them by using instructional strategies that force them to participate.

It is important to note, however, that one possible negative about using an LMS could occur if students rely too heavily on their teachers to provide everything relative to the course...

PowerPoint Slides

Students especially liked the availability of PowerPoint slides on an LMS to guide note taking during class presentations and while studying for tests. This confirmed the conclusions of Debevec et al. (2006) and Clark (2008) about how PowerPoint slides increased student focus and attention during class. When students commented on the availability and use of PowerPoint slides, overall comments were positive. For example, students described PowerPoint slides as detailed and helpful, stated how they made good use of and liked writing notes on these slides, and appreciated their availability online. Additionally, several stated they learned more because the PowerPoint slides were well-developed. This highlights the fact that students appreciate well-developed course content. So, teachers should consider how their course slides facilitate student learning. Additionally, teachers might clearly explain how the PowerPoint slides can serve as a framework to help guide their learning from lectures, textbooks, and other readings as well as remind students that not every slide will be discussed in class.

Blogs

One difficulty for many teachers is convincing students to read and apply what they read. Students commented that responding to blog questions helped them better understand assigned readings. Based on student comments and anecdotal evidence, the blogs were effective in motivating students to read, engage with, and understand assigned readings, as Bean (2001) also reported. Similar to Cheng and Chau (2011), the authors agreed that while students may not like

responding to blogs, (i.e., it took time and thought), they were convinced they learned more by reading and writing about what they read. Also, the authors found the use of blogs became even more effective when students were provided with timely feedback and specific examples of quality student posts and when blog responses were used as discussion starters in class. In comparing the positives and negatives, blogs contributed to student learning due to their investment of time in reading, thinking, and writing; still, many students would have preferred not to have to respond to the blogs because of the out-of-class time and effort required. The authors concluded that greater engagement with content led to more learning even though blogs were the least liked instructional strategy used.

Students enjoyed the variety of playing interactive review games to assess what they were learning or may not yet have learned.

Jeopardy-Like Game

One of the most popular technology-nested instructional strategies was using an active learning, change-of-pace Jeopardy-like game to review for tests; plus students liked having these games placed on the LMS for further review. Students enjoyed the variety of playing interactive review games to assess what they were learning or may not yet have learned. Students also found these games to be fun and enjoyable, which kept them engaged and interested during class. The amount of time for each interactive review game seemed well spent in helping students self-assess their learning and review for tests. Undergraduate students overwhelmingly enjoyed engaging in the Jeopardy-like games because they were fun yet beneficial. There were not any negatives, other than the initial time it took to develop each game.

Poll Everywhere and Lino

Due to the cost of clickers, the authors instead took advantage of two free classroom response systems, with students expressing appreciation for not having to purchase expensive clickers. Overwhelmingly, students enjoyed using Poll Everywhere because it was interactive, occurred in real-time, and gave them immediate feedback about what they were or were not learning. They were asked to respond individually or in groups, with the latter facilitating interactions with classmates. Students commented that they enjoyed learning from their classmates and sharing their own thoughts on a wide range of topics, without feeling anxiety over speaking in front of a large group of their peers. No doubt, student participation and engagement increased through in-class polling, as Sevian and Robinson (2011), DeBourgh (2008), and Patterson et al. (2009) also reported. Another classroom response strategy, Lino, received very positive feedback from several graduate students as they indicated using Lino helped their learning and was enjoyable. The positives of using Poll Everywhere and Lino were that they were free, students received immediate feedback on their responses which in turn contributed to class discussions as students learned from each other, and the technology-based approach was a change-of-pace strategy used to teach and review content. Since use of these two response systems forced student participation, a few students expressed they would have preferred to sit passively rather than engage actively.

Video Clips

Comments from students indicated videos were interesting, enjoyable, and helpful to their learning. Overwhelmingly, punctuating class lectures with video clips to reinforce or extend key points was an effective instructional approach and addressed the need to meet the visual learning styles of many students, which

Wright and Abell (2011) also found. Students appreciated the inclusion of video clips to inform their learning through real-world examples (Doyle, 2008). Almost all students liked the real-world applications and practicality shown through video clips to reinforce or expand their understanding of key concepts, which led to many positive comments about them. Video clips, however, add nothing to learning unless they are carefully chosen and connected specifically to what is taught or the key points to be reinforced visually.

When over 50% of undergraduate and graduate students rate a technology-based instructional strategy as *often* having a positive impact on their learning, this is strong evidence of their effectiveness, as the data in Table 1 verify. If a technology-based instructional strategy even *sometimes* has a positive impact on learning, its occasional use is supported. Through this action research project, the authors were strongly convinced students' comments and ratings supported the importance, and even essentiality, of continued use of technology-based instructional strategies. This action research project that used the authors' classes as case studies reaffirmed the use of LMS, PowerPoint slides, blogs, Jeopardy-like review games, Poll Everywhere, Lino, and video clips to positively impact student perceptions of their learning.

One limitation of this study is its exclusive use of sport and health classrooms, which could limit the generalizability of the findings. Researchers across disciplines should collaborate to use the same survey instruments and methods to study students' evaluation of technology-based learning strategies on their learning. Additionally, the results in this study are limited to students who chose to write anonymous, open-ended comments giving the authors no ability to follow up with students or probe students about the reasons they believe strategies do not positively impact their learning. This information is just as valuable as the reasons why they believe strategies do positively impact their learning. To examine this, researchers could conduct semi-structured interviews with students to gain a deeper understanding of why and how these strategies help them learn.

Conclusion

College students enjoy and value the use of technologies in their classes. The evidence illustrates how use of an LMS to organize and provide learning materials for students helps facilitate learning and active engagement with course content. Video clips add real-world examples and applications to further extend learning. Blogs are especially effective in holding students accountable for completing readings and focusing on learning because they must respond to prompts and provide specific examples from readings in their responses. Students seem to enjoy opportunities to share their opinions through classroom response systems, like Lino and Poll Everywhere, and thoroughly enjoy playing an interactive review game. Technology-nested strategies engage students actively in their learning and help reinforce information previously presented, especially as a change of pace punctuating traditional lectures.

Students' positive comments encourage the authors to continue to adapt and adopt technology-nested strategies to enhance learning. The authors remain committed to and desirous of increasing the infusion of technology-based instructional approaches in teaching. The positive results about student perceptions adds to the literature by challenging other faculty to incorporate innovative technologies in their courses and then gather evidence of strengthened and expanded student learning in their classes. Through this process faculty can learn what technologies students perceive as beneficial to their learning as well as enjoyable. Most importantly, student perceptions are valuable in assessing technology-based strategies because students'

Blogs are especially effective in holding students accountable for completing readings and focusing on learning because they must respond to prompts and provide specific examples from readings in their responses.

decisions to attend class and actively participate are inevitably linked to the use of these technologies. When students enjoy the learning process in their courses, they are more likely to prepare for, participate in, and interact with disciplinary content.

References

Bean, J. C. (2011). *Engaging ideas: The professor's guide to integrating writing, critical thinking, and active learning in the classroom* (2nd ed.). San Francisco, CA: Jossey-Bass.

Brookfield, S. D. (2006). *The skillful teacher: On technique, trust, and responsiveness in the classroom* (2nd ed.). San Francisco, CA: Jossey-Bass.

Cheng, G., & Chau, J. (2011). A comparative study of using blogs and wikis for collaborative knowledge construction. *International Journal of Instructional Media, 38,* 71-78.

Clark, J. (2008). PowerPoint and pedagogy: Maintaining student interest in university lectures. *College Teaching, 56*, 39-45.

Cooper, J. L., & Robinson, P. (2000). Getting started: Informal small-group strategies in large classes. *New Directions for Teaching and Learning, 81*, 17-24.

Davis, B. G. (1993). *Tools for teaching.* San Francisco, CA: Jossey-Bass.

Debevec, K., Shih, Mei-Yau, & Kashyap, V. (2006). Learning strategies and performance in a technology integrated classroom. *Journal of Research on Technology in Education, 38*, 293-307.

DeBourgh, G. A. (2008). Use of classroom "clickers" to promote acquisition of advanced reasoning skills. *Nurse Education in Practice, 8,* 76-87.

Diamond, R. M. (2008). *Designing and assessing courses and curricula: a practical guide* (3rd ed.). San Francisco, CA: Jossey-Bass.

Doyle, T. (2008). *Helping students learn in a learner-centered environment: A guide to facilitating learning in higher education.* Sterling, VA: Stylus Pub.

Hoover, D. S. (2006). Popular culture in the classroom: Using audio and video clips to enhance survey courses. *The History Teacher, 39*, 467-478.

Komarraju, M., & Karau, S. J. (2008). Relationships between the perceived value of instructional techniques and academic motivation. *Journal of Instructional Psychology, 35*, 70-82.

Lumpkin, A., Achen, R. M., & Dodd, R. K. (2015). Student perceptions of active learning. *College Student Journal, 49* (1), 121-133.

Malm, E., & Defranco, J. F. (2011-2012). Toward a student-centered measure of learning management system utilization. *Journal of Educational Technology Systems, 40*, 401-413.

McKeachie, W. J., Svinicki, M., & Hofer, B. K. (2011). *McKeachie's teaching tips: Strategies, research, and theory for college and university teachers* (13th ed.). Belmont, CA: Wadsworth.

Patterson, B., Kilpatrick, J., & Woebkenberg, E. (2009). Evidence for teaching practice: The impact of clickers in a large classroom environment. *Nurse Education Today, 30,* 603-607.

Sevian, H., & Robinson, W. E. (2011). Clickers promote learning in all kinds of classes — Small and large, graduate and undergraduate, lecture and lab. *Journal of College Science Teaching, 40*(3), 14-18.

Stowell, J. R., & Nelson, J. M. (2007). Benefits of electronic audience response systems on student participation, learning, and emotion. *Teaching of Psychology, 34*, 253-258.

Umbach, P. D., & Wawrzynski, M. R. (2005). Faculty do matter: The role of college faculty in student learning and engagement. *Research in Higher Education, 46,* 153-184.

Wright, D. G., & Abell, C. H. (2011). Using YouTube to bridge the gap between baby boomers and millennials. *Journal of Nursing Education, 50*, 299-300.

Yazedjian, A., & Kolkhorst, B. B. (2007). Implementing small-group activities in large lecture classes. *College Teaching, 55*, 164-169.

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Online Course Quality Assurance: Development of a Quality Checklist

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The University of Nebraska at Kearney's Online Course Checklist is the main instrument for assessing the quality of online courses at UNK. A number of issues were faced when developing and deploying this quality assurance checklist at a small four-year university. The process including development, implementation, and revision is discussed along with the need for faculty buy-in. Special considerations included how to assess the quality of an online course while ensuring academic freedom in accordance with a union contract. The purpose of this case study is to provide a roadmap for institutions that are developing an instrument of their own.

The number of students taking online courses continues to grow. According to a recent study, "Grade change: Tracking online education in the United States," by the Online Learning Consortium, 33.5% of higher education students in the fall of 2012 took an online course (Allen & Seaman, 2014). A total of 7.1 million students were taking at least one online course, an increase of 411,000 students from the previous year (Allen & Seaman, 2014). This represents a 6.1% increase (Allen & Seaman, 2014). Almost two-thirds of Chief Academic Officers (CAO) believe that it is very likely that students at higher education institutions will take at least one online course in the next five years. In addition, 65.9% of CAOs also believe online education is a critical piece in the long-term strategy for their institutions (Allen & Seaman, 2014).

As the number of courses delivered online has continued to grow, knowledge of what constitutes a successful online course has increased as well (Khan & Chishti, 2012; Singer, 2008). These include, but are not limited to, navigation (Chen, 2010; Graf, Luit, & Kinshuk, 2010; Metros & Hedberg, 2002; Sung & Mayer, 2012), the inclusion of rich media components (Borgemenke, Holt, & Fish, 2013; Havice, Davis, Foxx, & Havice, 2010; Schiefelbein, 2011) and opportunities for collaboration with peers and the instructor (Brindley, Blaschke, & Walti, 2009; Gonzalez, 2010; Orde et al., 2001).

Choices in course design have a far-reaching impact. The best medium through which to communicate within the confines of the learning management system must be selected (Schiefelbein, 2011). Planned flexibility in navigation helps learners adapt to the environment based on their cognitive styles (Chen, 2009). Course design impacts student engagement and success (Murray, Perez, Geist, Hedrick, & Steinback, 2012), with scaffolding helping to increase student engagement (Cho & Cho, 2013) and learner satisfaction (Havice et al., 2010). Online videos are growing in importance as ease of delivery continues to improve (DeCesare, 2014).

The success of an online course is based—in part—on the quality of instructional design. Faculty members are subject matter experts, but may not have the pedagogical background and instructional design skills necessary to develop quality online courses (Caplan, 2004). By helping them understand and apply best practices in online course creation and delivery, there is an increased level of success for faculty building courses and the learners for whom they build the class (Murray et al., 2012).

The success of an online course is based—in part—on the quality of instructional design.

To address this, institutions have adopted various strategies to provide support for faculty members developing online courses. This may come in the form of course shells or templates (Miller, 2012; "With Seton Hall's Course Template, All Faculty Are Champions," 2011). Other institutions create programs that provide faculty instructional design support ("Instructional Designer's Guide to Working with Faculty," 2006; Lorenzetti, 2009) to help build competency. Models where faculty focus on course design within their own discipline, rather than focusing on higher-level instructional design (Power, 2008), have proven effective at some institutions.

Some institutions focus on online course design from the institutional level, focusing on minimizing institutional barriers such as "compensation and time; organizational change; and technical expertise, support, and infrastructure" (Orr, Williams, & Pennington, 2009, p. 258). Others approach course development by creating an institutional infrastructure where online courses are an essential component of the institution's mission while shifting programs to online delivery (Hillman & Corkery, 2010). Online courses take more time to develop than traditional face-to-face courses (Rahm-Barnett & Donaldson, 2008). The amount of time and effort spent in developing these courses can cause pieces to be missed.

Regardless of the process or approach, quality assurance can be used to build confidence in the process and ensure that key factors leading to the success of the online course are incorporated into the course structure. Developing standard process and procedures aids in identifying quality standards ("Holding on to quality during rapid expansion", 2011; Hosie, Schibeci, & Backhaus, 2005). The quality assurance instrument provides a blueprint to follow during the review process, helping to streamline the review process.

Prebuilt quality control evaluation instruments such as Maryland Online's Quality Matters (QM) rubric, the Illinois Online Network's (ION) Quality Online Course Initiative rubric (QOCI), and California State University, Chico's Rubric for Online Instruction (ROI) may be adopted, while other institutions may consider building an evaluation instrument based on specific institutional needs. Such was the case at the University of Nebraska at Kearney where an in-house quality assurance instrument was developed. The purpose of this case study is to review the development, implementation, and revision process for UNK's Online Course Checklist and to provide a roadmap for any institution that is developing an instrument of their own.

Background

The University of Nebraska at Kearney (UNK) is a rural four-year university in the Great Plains. The 2013-14 total enrollment at UNK was 7,100 students with approximately 77% of these being undergraduates. eCampus is a UNK support department for online, blended, and videoconference courses. The department currently consists of nine full-time positions, including a director, three instructional designers, two video engineers, a marketing specialist, and two office associates. These nine positions support the approximately 100 faculty who teach online each semester.

Prior to 2004, no training was offered to faculty who taught online. By 2005, two instructional designers had been hired, and a training course was being offered once a year to faculty who wished to improve their online teaching. Prior to 2006, online courses were not evaluated at UNK. Faculty created and taught online

courses with no evaluation process. As online learning continued to grow, so did the need for quality assurance. With the rapid growth of online courses at UNK, the next logical step was to create a way to ensure that best practices from the training course were being used in online courses. "When managing multiple simultaneous course development projects, online development units can identify quality standards by taking advantage of standard processes and procedures" ("Holding on to quality during rapid expansion", 2011, p. 5). An evaluation instrument would show where "design and delivery are sound" and "identify deficient aspects" within courses (Hosie et al., 2005, p. 545).

Faculty at UNK develop their own courses, with the instructional designers available for consultation and to create media and interactive pieces that would be too difficult for the faculty to create on their own. This process has proven to be the most efficient way to support such a large number of courses with only three instructional designers.

The instructional design team referenced in this article consisted of two people. Steven McGahan and Karen Premer were, at the time when the instrument was developed, the only two instructional designers on the UNK campus. It should be noted that the process described in this case study was informal, until the instrument was turned over for review by the committees. The instructional design team was still relatively new, and the development of the instrument was a bottom-up process.

UNK had been offering online courses since 2000, when there were two courses with a total enrollment of 35 students. The first instructional designer was hired in December of 2003, and then a second was hired in October of 2004 to meet the growing demand for support for online courses. In the summer of 2006, online courses were the fastest growing segment of UNK course and program offerings. In the summer of 2006, there were a total of 52 faculty, offering 78 courses (undergraduate and graduate) with a total duplicated enrollment of 1,558. This substantial growth in online courses at UNK was one factor in the need for a way to assess the quality of courses.

With two instructional designers to consult and assist faculty in their course development and a solid training program in place, the next logical step was to either find or develop an instrument to ensure the quality of the courses being developed at UNK. Instructional designers attended the Illinois Online Network's Faculty Summer Institute (FSI) to find new ideas and technology for use at UNK. The idea to create a quality assurance instrument began at FSI.

One of the sessions was on the Quality Online Course Initiative Rubric, developed by the Illinois Online Network. This instrument rated the quality of online courses using many different criteria and allowed faculty to see where their courses might need improvement. Upon returning to UNK, the instructional designers decided to look into using one of the outside assessment instruments. The process began with the initial research into the rubrics available from other universities and initiatives.

Initial Research

Once the decision was made to apply a course quality instrument to UNK online courses, the first step was to review various instruments available to look for a prebuilt quality control evaluation that could be implemented immediately. With several options to choose from, the instructional designers narrowed the choices to three that were the most viable options and best fit the needs of the faculty: Maryland Online's Quality Matters (QM) rubric, the Illinois Online Network's (ION) Quality Online Course Initiative rubric (QOCI), and California State University, Chico's Rubric for Online Instruction (ROI).

Quality Matters

The Quality Matters (QM) rubric, developed by Maryland Online, is one of the most well-known course evaluation rubrics in online education. This was the natural starting-point to begin investigating off-the-shelf evaluation rubrics for use at UNK. The QM rubric covers several areas of criteria, including course overview and introduction, learning objectives, assessment and measurement, instructional materials, learner interaction, and engagement, course technology, learner support, and accessibility ("Quality Matters rubric," n.d.).

The official, fee-based process was reviewed first. The official process uses external reviewers to review a course. A QM reviewer assigns points based on the separate criteria that are weighted on a three-point scale. The weighted points denote the importance of each criterion, and the criteria that have a value of three points are all required to pass the review process.

Quality Matters had some distinct advantages. It was a large and comprehensive course evaluation rubric. The QM rubric covered several critical areas that would later be used as a starting point for some of the UNK course evaluation rubric. It also showed levels of competency for each criterion and weighted them according to their importance to an online course.

The disadvantages of the QM rubric were evident early in the review process. The complexity of the rubric and grading system precluded being used to assess online courses at UNK. The rubric also required a significant time commitment to complete, and there were not enough staff members to properly execute this grading rubric. Cost factors also contributed to not being able to use the official Quality Matters course evaluation process, as QM uses a fee-based system for their official reviews ("Guidelines from the Quality Matters rubric", 2009).

The use of the QM rubric would have been problematic because of concerns regarding academic freedom and compliance with the union contract governing UNK faculty. The academic freedom policy does not allow the grading of courses on a scale without some intervention by the Faculty Senate to approve this process. While this factor was unknown during the initial review (this concern would be brought up during the faculty review process), a way to evaluate the courses without assigning any points or a scale to the process was needed.

Quality Online Course Initiative

The Quality Online Course Initiative Rubric (QOCI) is an instrument developed by the Illinois Online Network. Much like the Quality Matters rubric, QOCI is a comprehensive rubric that covers several areas in the development of online courses, including instructional design; communication, interaction, and collaboration; student evaluation and assessment; learner support and resources; web design; and course evaluation ("Quality Online Course Initiative rubric", n.d.). The instrument uses a four-point grading system to evaluate criteria in each of the areas for quality. Unlike the QM rubric, QOCI is free to use, download, and modify for use at any institution (Patterson Lorenzetti, 2007), as it is licensed under a Creative Commons copyright ("Quality Online Course Initiative rubric", n.d.).

Much like the other instruments, this comprehensive rubric did a good job at evaluating the quality of a course. Its comprehensive nature was a positive, just like QM. It covered many areas that are critical to a quality online course. Unlike QM, no complex grading system was in the rubric, and therefore, was easier to use.

Again, there were disadvantages to QOCI. Much like Quality Matters, the instrument was rather long and took significant time to complete. QOCI comes in at 23 pages without instructions. The amount of time necessary to complete the rubric for a course would have been difficult to manage with the number of new courses being developed at UNK. Had QOCI been adopted, faculty and instructional designers would have been spending most of their time going through the rubric for

each of the courses, and QOCI would not have been able to offer other training opportunities and multimedia development to the faculty.

Again, the issues of evaluating faculty work and academic freedom would prohibit the adoption of this instrument. Information on how these issues were addressed will be presented at a later point in this discussion.

Rubric for Online Instruction

The Rubric for Online Instruction (ROI) is an instrument developed at California State University, Chico. The immediate opinion of the ROI was that at seven pages, it was far more compact than the other two instruments. Although it still covered many of the same issues in development, it would not take as much time to review a course as the other rubrics that were examined. The ROI covered six areas of development, including learner support and resources; online organization and design; instructional design and delivery; assessment and evaluation of student learning; innovative teaching with technology; and faculty use of student feedback ("Rubric for Online Instruction", n.d.). It was the easiest to use, and the time necessary to review a course was the shortest. ROI is also free to use and modify as it is available under a Creative Commons license ("Rubric for Online Instruction", n.d.).

Of the three instruments that were reviewed, the Rubric for Online Instruction was the least comprehensive. While the time factor was important, it was still necessary to take a comprehensive look at the aspects of a course that were seen as the most important. The ROI was a little too simple for use at UNK. While the categories were fairly comprehensive, specifics within each were too broad and did not point out certain key areas that were important in UNK courses. The number of criteria in each of the six sections ranged from three to five, for a total of 25 criteria.

One other drawback was the use of a three-point scale to evaluate each criterion. The ROI still used a rubric system that grouped each criterion into one of three classifications. This would certainly cause issues with the evaluation of faculty teaching and development. Again, it was necessary to use an instrument that did not appear to rate or rank the courses or faculty.

Instrument Development

After the determination was made that none of the three existing instruments met the specific needs of the UNK faculty and campus, it was decided that a specific UNK instrument was needed. Several factors needed to be addressed in an instrument for use on the UNK campus. These included ease of use, addressing multiple skill levels, encouraging rich media, and compliance with the faculty union contract.

Development of the Instrument Criteria

Culling from the large number of criteria that make a quality online course is not an easy task. The instructional designers reviewed several off-the-shelf instruments and current research on online course quality to determine what criteria would be included in the final instrument. Research shows that there are several factors to consider when developing a successful online course. Some of the major categories that were included were ease of course navigation, collaboration and interaction, encouraging rich media, multiple modes of learning and assessment, and Americans with Disabilities Act considerations. The instructional designers decided to leave out the more esoteric elements such as teaching style from the instrument, since these elements would be difficult to quantify.

Ease of Course Navigation

Course navigation can easily turn great content into a bad learning experience. Students need to feel comfortable in moving around a course, and a confusing navigation system will cause issues with learning. It seems a simple idea; however, poor navigational structure can be easily overlooked. Emphasis needs to be placed on how learners interact with the course interface. There is a need for clear design in navigation and interface and for less complexity in online courses (Metros & Hedberg, 2002). Students need a well-structured and organized course to be successful in online courses (Hoffman, 2012).

As with writing, a course developer can become so close to their own content that they are not able to see the issues present with the finished product. The course interface must be intuitive and facilitate learning and interaction between the learners and the content, instructor, and other students (Metros & Hedberg, 2002). What seems simple to use to the faculty member can feel like an impassible maze to the students. Course shells can improve navigation, leading to improved engagement (Miller, 2012).

Considering the learning styles of students may also reduce effort as well (Graf et al., 2010). Based on the way learners view the course structure, they can get lost in the learning management system (Sung & Mayer, 2012). The demands of navigation can cause a cognitive overload, preventing them from learning the content. The inability to find content, assignments, or links to help resources may frustrate students in a course (Sung & Mayer, 2012). Navigation behaviors differ based on cognitive style (Chen, 2010).

Several criteria were chosen to reflect the importance of navigation ("eCampus online," 2014); these include:

- A concise list of units/modules that will be completed in the course is provided;
- A concise list of activities that will be completed in the course is provided;
- The navigational instructions make the organization of the course easy to understand;
- The content is arranged in a manner that enables learners to achieve the stated goals;
- Resources and materials are easily accessible to and usable by the learners;
- Consistent layout design is used throughout;
- Scrolling is minimized by "chunking" materials;
- Navigation cues are present and identifiable (i.e., Start Here).

Collaboration and Interaction

Collaboration and interaction with the instructor, the content, and other students is important in helping the students feel connected to the course (Poole, 2000). Engaged students tend to be more successful students (Poole, 2000).

Requiring interaction among students and between students and the instructor using coordinated group activities, such as discussion boards and synchronous class sessions, can be very effective for learning (Orde et al., 2001). The formation of small collaborative groups can lead to deeper learning (Brindley et al., 2009). Use of these types of interaction and collaboration, if done correctly, can facilitate higher-level learning, and students can broaden their knowledge by reflecting on their own experiences and the knowledge and experiences of the other students and the instructor (Gonzalez, 2010). These types of tools can also be used solely to present information and course content (Gonzalez, 2010).

Collaboration and interaction were important aspects that needed to be addressed in the instrument. Not only do these create a sense of community in a course, but they also require that students learn along a specific timeline. In order

to participate in the course, students must interact with each other and the instructor at specific times during the course.

Several criteria were chosen to reflect the importance of collaboration and interaction ("eCampus online," 2014); these include:

- The instructor's role in discussion activities is clearly defined. (Facilitate, Clarify, Question, Observe, etc.).
- Learning activities are developed to stimulate communication and/or collaboration between student and instructor.
- Discussions are organized in specific forums and/or threads.
- The requirements for course interaction are clearly articulated.
- A statement is provided explaining when students should receive feedback for assignments, exams, discussion boards, and emails.
- Learning activities are developed to stimulate communication and/or collaboration between student and student.
- The course offers separate forums for Technical Questions, Content Related Questions, and Community Communication.
- A rubric defining student participation is provided.

Encouraging Rich Media

Rich media is an important part of online courses. Rich media can provide learners with nuanced messages through verbal and non-verbal cues, as well as "spoken and written word, and visual symbols and images" (Schiefelbein, 2011, p. 1). Simple text-based courses may have been standard in the early days of online education; however, students expect more from their online courses than reading and taking tests or writing papers. The integration of images, charts and graphs, audio, video, and interactive learning objects creates more interaction between the student and the content. In some cases, the inclusion of media itself isn't as important as the sense of control the learner feels in the environment (Borgemenke et al., 2013). The ability to control playback of rich media may help in "promoting greater reinforcement of course content and student engagement in the course" (Havice et al., 2010, p. 57; Lee & Chan, 2007).

When the instrument was originally written, online video was still in its infancy, and most courses at UNK did not use much in the way of visual elements. It is sometimes hard to believe how quickly technology changes the way instruction and content are handled. Images and audio were the common rich media at that point in time. Because of this, the technical aspects were the primary focus of the instrument.

The focus was not to make the courses pretty, but to add media that differentiated important areas and helped to engage the students in the course. As video was one of the more advanced aspects, it was necessary to steer these additions in the correct direction. The main purpose of the video should be to deliver content and methods of instruction, not to make the course more visually appealing (Castle & McGuire, 2010). This is not to say that these elements can only be used for presenting content. Increasing the presence and establishing the personality of the instructor can be achieved as well. Both synchronous and asynchronous video communication has an impact on students' view of the presence of the instructor and helps them perceive the instructor as a real person (Borup, West, & Graham, 2012).

Several criteria were chosen to reflect the importance of rich media ("eCampus online," 2014); these include:

- Technical Requirements – no specialized software or hardware is needed, and all players are provided or available freely for download;
- Images added to the course are clear;
- Image files are optimized for efficient loading;

- Audio materials added to the course are clear;
- Audio file length is adequate to meet the goals of the activity without adding unnecessary information;
- Video materials added to the course are clear;
- Video file length is adequate to meet the goals of the activity without adding unnecessary information;
- The selection and use of tools and media supports the learning objectives of the course;
- Selection and use of tools and media enhances learner interactivity.

Development Factors for the Instrument

In addition to focusing on the criteria for the instrument, it was necessary to consider specific issues that would arise when faculty at UNK tried to use the instrument. Some of these issues are common to most secondary educators; others were specific to the UNK faculty. When developing an online course evaluation, it is necessary to take into account not only what will be evaluated, but also how the instrument will function in the hands of those who use it. This meant looking at three specific issues: ease of use of the instrument, use by faculty with multiple skill levels, and compliance with the University of Nebraska at Kearney Education Association (UNKEA) Faculty Contract.

Ease of Instrument Use

First and foremost, the developed instrument needed to be easy for faculty to use. The main issue discovered when reviewing the off-the-shelf instruments was that the instruments were complex and required time-intensive evaluation. The instructional designers determined that they needed a rubric that would be both comprehensive and easy to use; the final instrument could be no more than three pages long and be easy enough to use as a self-assessment.

In order to get faculty on board with using the instrument, it needed to be simple enough to use without the assistance of an instructional designer. An instrument like Quality Matters or the Quality Online Course Initiative rubric requires a great deal of time and effort to complete successfully. These instruments included some instructional design principles that may have been unfamiliar to some faculty at UNK. Building and teaching an online course is time-consuming enough without adding a long process to decide whether the course is up to a certain standard of quality. The QM rubric has 41 separate quality criteria on one sheet; and, while this may seem like a quick system to use for the review of a course, it also prescribes weighted measures for each criterion with a secondary system that requires the reviewer to calculate a total score based on these weighted measures. QOCI ascribes a more standard, non-weighted system to assessing course quality; however, it also requires that the reviewer go through 23 pages of criteria and rate each on a three-point scale.

> **When developing an online course evaluation, it is necessary to take into account not only what will be evaluated, but also how the instrument will function in the hands of those who use it.**

Thus, the UNK instrument needed to be a hybrid of these two ideas: short enough to be completed in a relatively small period of time, and comprehensive enough to ensure that certain quality standards were addressed. Eventually, a simple complete/not complete checklist format was used, instead of a rubric-style rating system. This system made it much faster to complete than trying to assign a level of skill to each criterion. It also allowed the faculty to see what was needed for a quality course without having to read in-depth rationale for why a particular criterion was important, and read through examples of what was considered to be unsatisfactory versus excellent, and ratings in between. Although not as comprehensive, this system also allowed the faculty to take ownership of their own

work, as it relied on their experience as instructors to determine which factors constituted the level of quality. This relies on the faculty (with additional help from an instructional designer, when needed) to bring their experience with teaching to the instrument.

Addressing Multiple Faculty Skill Levels

Online courses are constantly in a state of change. As new content, technology, and resources arrive, courses must be changed to reflect the current state of the materials and of the resources available to the faculty who develop these courses. eCampus continually offers new technology and resources to assist faculty in the development and teaching of online courses. Faculty at UNK also have different levels of expertise with online education. Therefore, the instructional design team felt that one inclusive rubric would not satisfy the needs of all faculty.

To ameliorate the situation, instructional designers decided to break the instrument up into three separate instruments reflecting a higher skill level for each successive version. The first instrument would cover the basics of building an online course for the first time. This covered basics like course overview materials, basic navigation, technical support, course management, grading, and assessment.

The second rubric was built to function for the first revision of the course. When faculty were preparing to teach the course again, they would use the second rubric to add more features and raise the quality of the course. Criteria represented in the second rubric included broader use of multimedia, chunking materials, inclusion of rubrics, more depth in interaction and discussion, and more access to resources.

The final rubric covered more advanced areas, such as full ADA compliance, multiple learning methods, and more advanced materials to foster student-content interaction.

Compliance with Union Contract

One of the issues the instructional designers encountered when developing the online course evaluation instrument was the faculty union contract at UNK. The contract does not allow the evaluation of faculty because of academic freedom. Thus, faculty are allowed to develop their courses in whatever manner they wish. Balancing course quality with academic freedom was the key idea in creating a checklist instead of a rubric.

Since faculty at UNK cannot be directly evaluated, the checklist format, at the very least, allowed faculty to see some of the basic criteria that go into a quality course. This method is far less intrusive than an instrument that would tell them they had failed to create a quality course. Instead of showing faculty that they do not have a quality course, it shows where they may have missed items that can be included to create a quality course. While this system may not be perfect, it was the best that could be created to comply with the union contract and also ensure a level of quality. The use of the word "rubric" versus "checklist" will be discussed further in the following section.

Faculty Buy-In

When the first draft of the instrument was finished, it was necessary to gain the support of the key stakeholders in online course development. This meant that eCampus needed support from faculty on the use of the instrument. The logical place to start was the UNK Faculty Senate. Rather than take the instrument to the full senate, it was presented to the eCampus committee to gain support, resolve issues, and gain feedback.

The initial presentation of the UNK Online Course Rubric to the eCampus Faculty Senate committee was in late 2006. The committee members were given

copies of the rubric and asked to give their feedback on the rubric as a whole and on each of the individual criteria. The reviews were mostly positive, but some issues needed to be addressed.

The most strenuous arguments against the instrument in the form of a rubric were due to factors associated with academic freedom and the union contract. Committee members expressed concern over using a rubric to evaluate faculty: "While I think the rubric is comprehensive, I'm concerned that using a rubric violates our academic freedom." The general consensus was that the Union Contract did not allow for faculty to be assessed in this manner.

Several members of the committee were adamantly against using an evaluation rubric. One faculty member vehemently stated, "I don't use rubrics in my classes, why should I have to use one to evaluate my online course?" This statement reflected the attitudes of many faculty on the UNK campus at that time. Online education was still relatively new, and there was push-back about assessing teaching. This has changed over the past several years, but the legalities have remained the same. It should also be noted that there were, and still are, some faculty who resent having instructional designers with master's degrees evaluating the work of those with doctorates.

After further debate, the committee decided to change the rubric to a self-assessment instrument in the form of a checklist. While not ideal, this solution also created more buy-in from the faculty. At this point, the rubric officially became a checklist.

The members of the eCampus Faculty Senate Committee gave further input on minor changes in wording. These changes were considered, and then most were implemented, as none of them caused the criteria to change significantly. Some examples include the use of "learning activities" instead of "assessment," the inclusion of "modules" instead of "units" to refer to learning units, and adding "provided software" to a statement about freely available downloads. Afterward, the instrument received approval to move forward to the full Faculty Senate for a vote on implementation. The Online Course Checklist was approved by the Faculty Senate for use at UNK in the spring of 2007.

Testing the Instrument

Once the checklist was approved for use, a testing phase was initiated to determine if the instrument was useable, both by the instructional designers as a review instrument and by the faculty as a self-assessment. The time-intensive nature of the testing process for the checklist did not allow for a quantitative assessment of the instrument. Instead, the testing process was qualitative. The initial testing phase was an informal process of using the checklist during online course reviews and consultations. This worked as a self-selecting process where the first faculty to come for a consultation or course review were asked to use the checklist as part of the process. A total of 17 faculty members participated in the testing phase and provided feedback. Additional faculty teaching online were asked to review the checklist on their own to assess its usability as a self-assessment tool; these included members of the eCampus Faculty Senate Committee.

Initial reaction by the faculty was positive. The checklist helped to identify areas in their courses that were deficient and allowed them to revise their navigation and content to reflect a more user friendly experience for both the students and the faculty. The most common areas in the anecdotal evidence from part one of the checklist were those of navigation issues and the availability of resources. The second checklist showed the two criteria most commonly missed were "chunking" of materials and consistent use of navigational cues. The most common issue found when using the third checklist was the lack of proper ADA compliance.

Feedback on the checklist was not totally positive. A few faculty members voiced concerns about academic freedom, which was a common thread running through the creation process of the checklist. Some faculty were not happy about

having a set of standards applied to their teaching. The use of the checklist to ensure quality was seen as an affront to their ability as instructors, even though the transition to an online format created new issues that they had not encountered in their face-to-face courses. The addition of a technical aspect, while seen as a threat, did not register as an area that some faculty felt needed any oversight.

One of the more common issues was that of length. Some felt that the instrument was too long to be used as a self-evaluation. This reinforced the idea to split the checklist into three separate parts, instead of presenting it as a whole instrument. After a review of the criteria, it was decided that, while there would be some complaints from faculty, the comprehensive nature of the instrument should stay the same, and none of the criteria would be eliminated. This also reinforced the instructional designers' choice not to use the off-the-shelf instruments reviewed initially.

Revision of the Instrument and Deployment

Once the testing process was completed, the checklist was revised to reflect some of the concerns. The checklists did not change greatly during the revision process; mainly, language was revised and items were moved around in the individual checklists and between checklists. Some criteria were rewritten to be more specific, and others were moved to the more advanced checklists and vice-versa.

Once the revision was complete, it was necessary to deploy the checklists for use by the faculty and the instructional designers. The checklists were initially deployed on the eCampus website providing easy access to those who wanted to use it. An announcement regarding the availability of the checklists was sent to the entire campus via email. In addition to these electronic distribution methods, several information and training sessions were held to demonstrate and discuss the checklists with faculty. Finally, any faculty member who applied for a stipend to create an online course was sent a copy of the initial checklist via campus mail.

It is worth noting that the three checklists have recently been reduced to two. After several years of use, it was decided that the general level of expertise of the UNK faculty had grown enough to move some of the more advanced criteria to the first and second checklists. This left only a few criteria on the third checklist, so these were moved to the second checklist as well. This revision of the original instruments was also the impetus for writing this case study.

Integration with Other Resources

One of the initial outcomes of the testing and revision phase of the project was the need to integrate the checklist with other resources. Specifically, the Online Course Template was developed to give faculty a starting point for their classes and add in resources that many would not include in their course design.

The course template adds a Unit/Module structure to the traditional Blackboard shell and allows faculty to break up their content over several areas, instead of putting it all together in one folder. This creates an easier to understand and less confusing navigation structure for students to follow.

These particular features were addressed in several of the checklist sections. The use of these review standards in the checklist tied it to the template. Many of the criteria from the first checklist were tied directly to the template. This reinforced the standards and also made it easier for faculty to comply with the checklist criteria. This also allowed the instructional designers to perform a course review in less time, provided the faculty member had used the template in their course. Tying together the checklist and template also promoted the resources available to faculty across the disciplines.

Key Takeaways

Building a course evaluation instrument can take large amounts of time and resources. Some best practices to help reduce this time are as follows:

- Use a pre-built instrument if it fits the needs of the campus.
- Review several instruments and apply them to a few courses before deciding what to use.
- If creating an instrument, start with instruments that fall under Creative Commons, rather than starting from scratch
- Identify the three or four most important issues that must be addressed and start with these.
- Once the most important issues are addressed and complete, move to the next set.
- Make sure that the instrument is easy to use and has language that does not confuse the reader. Involve faculty (and union if there is one on campus) to create a higher level of faculty buy-in.
- Test, test, test. There is no substitute for testing the instrument on multiple courses with multiple reviewers. Some of these reviewers should be faculty.
- Align the instrument with training and other resources.

Conclusion

An online course evaluation instrument is a critical component to any successful online course/program/institution. While prebuilt instruments can be quickly deployed, they may not properly serve the local campus community. Careful review of these instruments is needed before making any decision about creating a specific instrument for a campus. This may take time and resources, but it will create a more successful faculty, which in turn, creates a more successful student population. Tailoring an instrument to a specific university or college can be an excellent use of resources, if done with care and thought.

Recommendations

While reaction to the Online Course Checklist has been mostly positive, some issues should be addressed in the future. These include, but are not limited to, creating a separate actionable checklist for proactive development, recoding/grouping the criteria to make the checklist more useable, and revising the checklist to include newer technology and pedagogy skills.

The Online Course Checklist has been a useful evaluative tool for online courses at UNK. As an actionable tool for course development, there are some doubts as to its efficacy. The specific nature of the criteria makes the checklist better for reactive changes to courses. A smaller instrument, with broader categories and fewer granular items, might be more useful as a tool for initial creation of courses. This type of instrument would create a roadmap for those creating a course for the first time.

Make sure that the instrument is easy to use and has language that does not confuse the reader. Involve faculty (and union if there is one on campus) to create a higher level of faculty buy-in.

Another issue is that the checklist has not been updated recently. Developments in technology and learning research may necessitate the revision of the instrument to reflect current standards and best practices. Most notably, new collaborative technology to facilitate interaction, the expanded use of interactive content to engage students, and the greater role of both in-house and professional video as a means of instruction and engagement. This should be an ongoing process, as a checklist of this nature should be a living document that reflects the current state of online education.

References

Allen, I. E., & Seaman, J. (2014). *Grade change: Tracking online education in the United States*. Retrieved from the Online Learning Consortium website: http://www.onlinelearningsurvey.com/reports/gradechange.pdf

Borgemenke, A. J., Holt, W. C., & Fish, W. W. (2013). Universal course shell template design and implementation to enhance student outcomes in online coursework. *Quarterly Review of Distance Education*, *14*(1), 17-23.

Borup, J., West, R. E., & Graham, C. R. (2012). Improving online social presence through asynchronous video. *Internet and Higher Education*, *15*(3), 195-203.

Brindley, J. E., Blaschke, L. M., & Walti, C. (2009). Creating effective collaborative learning groups in an online environment. *International Review of Research in Open and Distance Learning*, *10*(3), 1-18. Retrieved from http://www.irrodl.org/index.php/irrodl/article/view/675/1313

Caplan, D., & Graham, R. (2004). The development of online courses. *Theory and Practice of Online Learning*, 175.

Castle, S. R., & McGuire, C. J. (2010). An analysis of student self-assessment of online, blended, and face-to-face learning environments: Implications for sustainable education delivery. *International Education Studies*, *3*(3), 36-40.

Chen, L. (2010). Web-based learning programs: Use by learners with various cognitive styles. *Computers & Education*, *54*(4), 1028-1035. doi:10.1016/j.compedu.2009.10.008

Cho, M., & Cho, Y. (2014). Instructor scaffolding for interaction and students' academic engagement in online learning: Mediating role of perceived online class goal structures. *Internet & Higher Education*, *21*, 25-30. doi:10.1016/j.iheduc.2013.10.008

DeCesare, J. (2014). The expanding role of online video in teaching, learning, and research. *Library Technology Reports*, *50*(2), 5-11.

eCampus online course checklists. (2014). Retrieved from the University of Nebraska at Kearney eCampus Website: http://www.unk.edu/academics/ecampus/resources-info/faculty/online-course-checklists.php

Gonzalez, C. (2010). What do university teachers think eLearning is good for in their teaching? *Studies in Higher Education*, *35*(1), 61-78.

Graf, S., Liut, T.-C., & Kinshuk. (2010). Analysis of learners' navigational behaviour and their learning styles in an online course. *Journal of Computer Assisted Learning*, *26*(2), 116-131.

Guidelines from the Quality Matters rubric. (2009, October 1). *Distance Education Report*, *13*(19), 5,7.

Havice, P. A., Davis, T. T., Foxx, K. W., & Havice, W. L. (2010). The impact of rich media presentations on a distributed learning environment engagement and satisfaction of undergraduate students. *Quarterly Review of Distance Education*, *11*(1), 53-58.

Hillman, S., & Corkery, M. (2010, November) University infrastructural needs and decisions in moving towards online delivery programmes. *Journal of Higher Education Policy and Management*, *32*(5), 467-74.

Hoffman, G. L. (2012) Using the Quality Matters rubric to improve online cataloging courses. *Cataloging & Classification Quarterly*, *50*(2-3), 158-71.

Holding on to quality during rapid expansion. (2011, August 1). *Distance Education Report*, *15*(15), 5-6.

Hosie, P., Schibeci, R., & Backhaus, A. (2005, October). A framework and checklists for evaluating online learning in higher education. *Assessment & Evaluation in Higher Education*, *30*(5), 539-553. doi:10.1080/02602930500187097

Instructional designer's guide to working with faculty. (2006, February 1). *Distance Education Report*, *8*(3), 8, 6.

Khan, S., & Chishti, S. (2012) Effects of staff training and development on professional abilities of university teachers in distance learning systems. *Quarterly Review of Distance Education*, *13*(2), 87-94.

Lee, M. J. W., & Chan, A. (2007). Pervasive, lifestyle-integrated mobile learning for distance learners: An analysis and unexpected results from a podcasting study. *Open Learning: The Journal of Open and Distance Learning*, *22*(3), 201-218.

Lorenzetti, J. (2009). Developing faculty competency in online pedagogy. *Distance Education Report*, *13*(18), 5-8.

Metros, S. E., & Hedberg, J. G. (2002). More than just a pretty inter(face) The role of the graphical user interface in engaging elearners. *The Quarterly Review of Distance Education*, *3*(2), 191-205.

Miller, J. M. (2012). *Finding what works online: Online course features that encourage engagement, completion, and success* (Doctoral dissertation). Retrieved from California State University Northridge ScholarWorks website: http://scholarworks.csun.edu/handle/10211.2/1062

Murray, M., Pérez, J., Geist, D., Hedrick, A., & Steinbach, T. (2012). Student interaction with online course content: Build it and they might come. *Journal of Information Technology Education*, *11*, 125-140.

Orde, B. J., Andrews, J., Awad, A., Fitzpatrick, S., Klay, C., Lie, C., Whitney, J. (2001). Online course development: Summative reflections. *International Journal of Instructional Media*, *28*(4), 397-403.

Orr, R., Williams, M. R., & Pennington, K. (2009). Institutional efforts to support faculty in online teaching. *Innovative Higher Education*, *34*(4), 257-268. doi:10.1007/s10755-009-9111-6

Patterson Lorenzetti, J. (2007, November 15). Tool of the trade: Using the QOCI evaluation rubric. *Distance Education Report*, 11(22), 5, 7-8.

Poole, Dawn M. (2000). Student participation in a discussion-oriented online course: A case study. *Journal of Research on Computing in Education*, *33*(2), 162-77.

Power, M. (2008). A dual-mode university instructional design model for academic development. *International Journal for Academic Development*, *13*(1), 5-16. doi:10.1080/13601440701860185

Quality Matters rubric. (n.d.). Retrieved from Quality Matters: https://www.qualitymatters.org/rubric

Quality Online Course Initiative rubric. (n.d.). Retrieved from Illinois Online Network: http://www.ion.uillinois.edu/initiatives/qoci/rubric.asp

Rahm-Barnett, S., & Donaldson, D. P. (2008, March 1). 5-4-3-2-1 - Countdown to course management. *Distance Education Report*, *12*(5), 3, 7.

Rubric for Online Instruction. (n.d.). Retrieved from California State University, Chico Website: http://www.csuchico.edu/roi/

Schiefelbein, J. (2011, March). Media richness and communication in online education. Online Classroom, 1-5.

Singer, B. (2008). Online professional development: Combining best practices from teacher, technology and distance education. *Journal of In-Service Education*, *34*(2), 205-218.

Sung, E., & Mayer, R. E. (2012). Affective impace of navigational and signaling aids to e-learning. *Computers in Human Behavior*, *28*, 473-483.

With Seton Hall's Course Template, All Faculty Are Champions. (2011). *Distance Education Report*, *15*(7), 1-8.

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Call for Papers

Volume 11: *Scholarly Teaching and Learning*

InSight: A Journal of Scholarly Teaching is a scholarly publication designed to highlight the work of postsecondary faculty at colleges and universities across the United States. It is a refereed scholarly journal published annually by the Center for Excellence in Teaching and Learning (CETL) at Park University that features theoretical and empirically-based research articles, critical reflection pieces, case studies and classroom innovations relevant to teaching, learning and assessment.

InSight articles focus broadly on Scholarly Teaching. Faculty are encouraged to submit original manuscripts that showcase scholarly teaching processes or critically discuss the scholarship of teaching and learning (SoTL) as a scholarship paradigm. While reports of scholarly teaching projects are welcome, *InSight* is also committed to continuing broader conversations about SoTL's value as a tool for advancing student learning and demonstrating faculty commitment to teaching.

Faculty are encouraged to submit manuscripts related to:

- Challenges/Responses to the SoTL paradigm
- Developing institution or discipline-specific understandings/definitions of SoTL
- Status reports of SoTL's role in a particular discipline
- Guidance to faculty new to SoTL (on developing inquiry questions, determining methodologies, making SoTL work public, etc.)
- Examples of SoTL projects at the course or discipline-level
- Intersections of SoTL and service-learning, eLearning, learning communities, and other learning initiatives
- Future directions in SoTL
- Cross-disciplinary and cross-institutional collaborations for promoting SoTL.

Submission Requirements

- *STYLE* - All manuscripts must be formatted in APA style.
- *LENGTH* - Manuscripts may range from 2,000 - 5,000 words (not including abstract, references or appendices). Authors are encouraged to include appendices that promote application and integration of materials (i.e., assignments, rubrics, examples, etc.).
- *ABSTRACT* - Each manuscript must be summarized in an abstract of 50 to 100 words.
- *AUTHOR* - Each author should provide his/her full name, title and departmental affiliation, campus address, telephone number, and email address. Each author must also include a brief biography (no more than 100 words per author).
- *FORMAT* - All manuscripts must be submitted via email as attachments in Microsoft Word or Rich Text Format. Do not include personal identifiers within the manuscript. Include contact information only on a separate cover sheet. Each manuscript will be assigned a unique identifier for blind review processes. Send submissions to cetl@park.edu.
- *DEADLINE* - All submissions must be received by **4:00pm on March 1, 2016 (CST)** to be considered for inclusion in Volume 11.

Review Procedures

Submissions will be subject to a double blind peer-review. A manuscript is evaluated based on relevance, practical utility, originality, generalizability, clarity, significance and the extent to which the subject matter contributes to the ongoing development of the scholarship of teaching and learning. Review process and

publication decisions will require approximately 12 weeks. Referees' feedback and editorial comments will be provided to the author when revisions are requested. CETL retains the final authority to accept or reject all submitted manuscripts. The publication will be distributed both in print and online fall 2016.

Copyright

Manuscript submissions are accepted with the assumption that they neither have been nor will be published elsewhere. Authors and CETL will hold joint copyright to all published manuscripts.

Contact

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QUICK TIPS: PREPARING MANUSCRIPTS FOR *INSIGHT*

The following "Quick Tips" provide suggestions and guidance for preparing manuscripts for potential publication in *InSight: A Journal of Scholarly Teaching. InSight* is a peer-reviewed publication highlighting the scholarly contributions of postsecondary faculty. As is the nature of refereed journals, acceptance and publication of original manuscripts is a competitive process. The goal of the following information is to assist faculty in preparing manuscripts in a manner that maximizes the chances of publication.

Preparing the Manuscript

The organization and style your manuscript will be largely dictated by the type of submission (e.g., theoretical, empirical, critical reflection, case study, classroom innovation, etc.). Thus, while guidelines will follow to assist you in preparing your manuscript, the key to successful submission is clear, effective communication that highlights the significance and implications of your work to post-secondary teaching and learning in relation to the target topic. To prepare and effectively communicate your scholarly work, the American Psychological Association (2010) provides the following general guidelines:

- Present the problem, question or issue early in the manuscript.
- Show how the issue is grounded, shaped, and directed by theory.
- Connect the issue to previous work in a literature review that is pertinent and informative but not exhaustive.
- State explicitly the hypotheses under investigation or the target of the theoretical review.
- Keep the conclusions within the boundaries of the findings and/or scope of the theory.
- Demonstrate how the study or scholarly approach has helped to address the original issue.
- Identify and discuss what theoretical or practical implications can be drawn from this work.

There is no mandatory format for *InSight* articles; rather authors should organize and present information in a manner that promotes communication and understanding of key points. As you write your manuscript, keep the following points in mind:

- Title - Generally speaking, titles should not exceed 15 words and should provide a clear introduction to your article. While it is okay to incorporate "catchy" titles to pique interest, be sure that your title effectively captures the point of your manuscript.
- Abstract - Do not underestimate the importance of your abstract. While the abstract is simply a short summary (50-100 words) of your work, it is often the only aspect of your article that individuals read. The abstract provides the basis from which individuals will decide whether or not to read your article, so be certain that your abstract is "accurate, self-contained, nonevaluative, coherent, and readable" (Calfee & Valencia, 2001).
- Body - Within the body of a manuscript, information should be organized and sub-headed in a structure that facilitates understanding of key issues. There is not a mandatory format for *InSight* articles; rather authors should use professional guidelines within their discipline to present information in a manner that is easily communicated to readers. For example:

- *Empirical investigations* should be organized according to the traditional format that includes introduction (purpose, literature review, hypothesis), method (participants, materials, procedures), results, and discussion (implications). The following links provide general examples of this type of article:
  - http://www.thejeo.com/MandernachFinal.pdf
  - http://www.athleticInSight.com/Vol7Iss4/Selfesteem.htm
- *Theoretical articles and literature reviews* should include an introduction (purpose), subheadings for the relevant perspectives and themes, and a detailed section(s) on conclusions (applications, recommendations, implications, etc.). The following links provide general examples of this type of article:
  - http://www.westga.edu/%7Edistance/ojdla/winter84/royal84.htm
  - http://www.westga.edu/%7Edistance/ojdla/winter84/mclean84.htm
- *Classroom innovation and critical reflections* should be organized via an introduction (purpose, problem, or challenge), relevant background literature, project description, evaluation of effectiveness (may include student feedback, self-reflections, peer-insights, etc.), and conclusions (applications, implications, recommendations, etc.). If describing classroom-based work, please include copies of relevant assignments, handouts, rubrics, etc. as appendices. The following link provides a general example of a critical reflections article:
  - http://www.compositionstudies.tcu.edu/coursedesigns/online/33-2/ritter.htmlv

The limited length of *InSight* articles (manuscript should be no more than 5000 words, not including abstract, references or appendices) requires authors to focus on the most significant, relevant factors and implications.

- References - Select your references carefully to ensure that your citations include the most current and relevant sources. As you select your references, give preference to published sources that have proven pertinent and valuable to the relevant investigations. The goal is not to incorporate ALL relevant references, but rather to include the most important ones.
- Tables, Figures, Appendices & Graphics - Authors are encouraged to include supporting documents to illustrate the findings, relevance or utilization of materials. Particularly relevant are documents that promote easy, efficient integration of suggestions, findings or techniques into the classroom (such as rubrics, assignments, etc.). Supplemental information should enhance, rather than duplicate, information in the text.

The importance of clear, effective communication cannot be highlighted enough. Many manuscripts with relevant, original, applicable ideas will be rejected because authors do not communicate the information in a manner that facilitates easy understanding and application of key points. The value of a manuscript is lost if readers are unable to overcome written communication barriers that prevent use of the knowledge. With this in mind, authors are strongly advised to seek informal feedback from peers and colleagues on manuscripts prior to submission to *InSight*. Requesting informal reviews from relevant professionals can highlight and correct many concerns prior to formal submission, thus improving chances of publication.

References

American Psychological Association. (2010). *Publication manual of the American Psychological Association* (6th ed.). Washington, DC: Author.

Calfee, R. & Valencia, R. (2001). *APA Guide to preparing manuscripts for journal publication*. Washington, DC: APA.

QUICK TIPS: SUBMISSION GUIDELINES FOR *INSIGHT*

The following "Quick Tips" provide suggestions and guidance for submitting manuscripts to *InSight: A Journal of Scholarly Teaching*. *InSight* is a peer-reviewed publication highlighting the scholarly contributions of postsecondary faculty. The following information provides an overview of the purpose; scope and functioning of InSight so that faculty may better understand the *InSight* publication process.

Scope & Focus

InSight features theoretical and empirically-based research articles, critical reflection pieces, case studies, and classroom innovations relevant to teaching, learning and assessment. While there are a broad range of acceptable topics, all manuscripts should be supported with theoretical justification, evidence, and/or research (all methods and approaches relevant to qualitative and quantitative research are welcome); all manuscripts should be appropriately grounded in a review of existing literature.

Audience

InSight emphasizes the enhancement of post-secondary education through the professional exchange of scholarly approaches and perspectives applicable to the enrichment of teaching and learning. Relevant to this mission, manuscripts should be geared toward post-secondary faculty and administrators; included in this audience are full-time and adjunct faculty; face-to-face, hybrid and online faculty; tenure and non-tenure track instructors; trainers in corporate, military, and professional fields; adult educators; researchers; and other specialists in education, training, and communications. Recognizing the cross-disciplinary readership of *InSight*, manuscripts should present material generalizable enough to have relevance to post-secondary instructors from a range of disciplines.

Review Process

All submissions are evaluated by a double-blind, peer-review process. The masked nature of the reviews helps ensure impartial evaluation, feedback and decisions concerning your manuscript.

This review process utilized by *InSight* mandates that you should keep the following points in mind when preparing your manuscript:

- Your name and other identifying information should only appear on the title page; the remainder of the manuscript should be written in a more generalized fashion that does not directly divulge authorship.
- All information needs to be explained and supported to the extent that an individual not familiar with a particular institution's mission, vision or structure can still clearly understand the relevance, significance and implications of the article.

Focus of the Review

Prior to dissemination to the reviewers, the *InSight* Managing Editor will conduct a preliminary appraisal for content, substance, and appropriateness to the journal. If the manuscript is clearly inappropriate, the author will be informed and the manuscript returned. Appropriate manuscripts will be electronically sent to two reviewers for blind evaluation. Although there is an attempt to match manuscripts and reviewers according to content, interests, and topical relevance, the broad focus

of the journal dictates that papers be written for applicability to a wide audience. As such, reviewers may not be content experts in a relevant, matching academic discipline.

The manuscript will be reviewed and evaluated according to the following dimensions:

- <u>Relevance</u> - The most important feature of your manuscript is its relevance; the decision to accept or reject a manuscript is typically based on the substantive core of the paper. As such, manuscripts should introduce the substance of the theoretical or research question as quickly as possible and follow the main theme throughout the article in a coherent and explicit manner.
- <u>Significance</u> - Related to relevance, significance refers to the value of your manuscript for substantially impacting the enhancement of post-secondary education relevant to the target topic. Significant manuscripts will clearly highlight the value, importance and worth of a relevant topic within a meaningful context.
- <u>Practical Utility</u> - As highlighted previously, the goal of *InSight* is to enhance teaching and learning through the exchange of scholarly ideas. With this purpose in mind, all manuscripts should emphasize the practical value, relevance or applicability of information. Manuscripts should go beyond the simple reporting of information to provide InSight into the implications of findings and the application of information into meaningful contexts.
- <u>Originality</u> - The most effective articles are those that inspire other faculty through innovative practices, approaches and techniques or via the thoughtful self-reflection of the purpose, value and function of educational strategies. Thus, manuscripts that highlight original approaches or perspectives will be given priority. Per the nature of published work, all contributions must be the original work of the author or provide explicit credit for citations.
- <u>Scholarship of Teaching</u> - Contributions to the enrichment of teaching and learning should be grounded in relevant theoretical concepts and empirical evidence. As such, articles should be free from flaws in research substance/methodology and theoretical interpretation. All conclusions and recommendations must be substantiated with theoretical or empirical support; personal classroom experiences and critical reflections should be framed within a structure of existing literature.
- <u>Generalizability</u> - The broad goals and varied audience of *InSight* mandate that manuscripts be written for consumption across a range of disciplines that allows generalizability of findings and implications. Thus, while classroom techniques may be developed, tested and reported for a specific discipline or student population, the manuscript should go on to highlight the implications for other populations.
- <u>Clarity</u> - All manuscripts must be written in a clear, professional manner free from grammatical flaws and errors in writing style. The purpose of the manuscript should be clearly defined, relevant and supported by the evidence provided. All manuscripts should be structured in a manner that promotes a clear, cohesive understanding of the information presented. Be sure that your manuscript is free from organizational, stylistic or "sloppiness" barriers that would prevent effective communication of your work.

Review Outcomes

Based upon the feedback and recommendations of the two anonymous reviewers, the Editor will make a final publication decision. Decisions fall into the following categories:

- Reject - Rejected manuscripts will not be published and authors will not have the opportunity to resubmit a revised version of the manuscript to *InSight*. All rejections will be handled in a courteous manner that includes specific reasons for rejection.
- Revise and Resubmit – A manuscript receiving a revise-and-resubmit recommendation shows potential for publication, but needs significant attention and revisions. Those electing to resubmit will be subjected to a novel round of blind review.
- Accept Pending Revisions - A manuscript accepted-pending-revisions meets all the major requirements for publication but may need improvements in substantive, mechanical or methodological issues. Once these issues are adjusted for, the manuscript will receive a "quick review" by the Editor prior to publication. Very rarely is an article accepted with no changes required; as such, most manuscripts are accepted in this category.
- Accept - Accepted manuscripts will be published "as-is" with no further modifications required.

References

American Psychological Association. (2010). *Publication manual of the American Psychological Association* (6th ed.). Washington, DC: Author.

Calfee, R. & Valencia, R. (2001). *APA guide to preparing manuscripts for journal publication*. Washington, DC: APA.

"Shall I tell you the secret of the true scholar? It is this: Every man I meet is my master in some point, and in that I learn of him."

~ Ralph Waldo Emerson, "Greatness"