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Technological Innovation or Educational Evolution? A Multi-disciplinary Qualitative Inquiry into Active Learning Classrooms

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Abstract: In recent years, many institutions have transformed traditional classrooms (TCs) into technology-rich active learning classrooms (ALCs) to accommodate the pedagogical concept of “active learning”. In order to investigate the impact of ALCs on teaching and learning, we observed an instructor teaching in an ALC for an entire academic year, audio/video-recorded every class and took field notes. A focus group discussion was conducted with faculty from six allied health disciplines who taught weekly classes in the ALC and an online survey was distributed to students who took those classes. Data was then analysed using a qualitative constant comparative method (CCM). Findings indicated that the ALC generated greater teaching and learning enjoyment, deepened engagement, amplified interaction, enhanced group activity efficiency and fostered the development of creative ideas. All these features were interrelated and created a synergistic effect on student learning.

Keywords: active learning classroom, technology, engagement, interaction, group activities, creativity,

Introduction

Educators agree that the goals of education should be to engage and inspire students, as well as motivate them to learn content and necessary skills (Auster & Wylie, 2006). Researchers have criticized traditional teaching approaches as they were oftentimes considered autocratic and failed to take student learning into account. The teachers determined what, how, and when students learned and students just sat and passively listened to the teachers (Bonwell & Eison, 1991; Chickering & Gamson, 1987; Dupin-Bryant, 2004; M. R. Gregory, 2002; Laurillard, 2002; Lowman, 1984; Penner, 1984; Steuter & Doyle, 2010; Umbach & Wawrzynski, 2005).

One strategy to remedy the inadequacy of traditional teacher-centered passive approaches is active learning. Active learning has been described as both involving students in doing things but also in thinking about what they are doing (Bonwell & Eison, 1991, p. 19). However, the traditional brick-and-mortar classroom often does not create an environment that promotes a student's engagement in learning (Thomas, 2010, p. 503). Effective interaction and group activities, the key elements of active learning, are not conveniently accomplished around fixed

tables and chairs. When promoting active learning, flexibility in the learning environment is beneficial.

In 2007, Michael Wesch, a cultural anthropologist and media ecologist at Kansas State University, asked his 200 college students, “What is it like being a student today?”. Based on the feedback, Wesch and the students made a video called “A Vision of Students Today” (Wesch, 2007) and posted it on Youtube. It soon became one of the top hits on the web with millions of views. This video accurately captured the typical characteristics of students today. “I will read 8 books this year, 2300 web pages and 1281 Facebook profiles.” “I spend 2 hours on my cell phone.” “I bring my laptop to class, but I’m not working on class stuff.” These plain facts are thought-provoking to educators. No doubt that students today are no longer the same as those prior to the invention of computers, Internet, and smart devices. In the traditional classroom, students sit in rows taking notes on paper while teachers stand on the podium writing on the chalkboard. Teachers are the students’ primary source of knowledge. Today, in the era of information technology, students can search for information on any given subject in a matter of seconds due to the ubiquitous use of laptops, tablets, and smart phones and the omnipresent access to Internet. Students no longer browse through bookshelves in the library, searching for information to finish an assignment. Universities are challenged with the urgent need of incorporating information technology into the learning environment to accommodate this new generation’s learning habits (Long & Ehrmann, 2005; Oblinger, 2005).

Many institutions in higher education have taken the initiative to transform traditional classrooms (TCs) into technology-rich active learning classrooms (ALCs) to meet the needs of current learners. Leading examples include North Carolina State University (NCSU)’s SCALE-UP project (Robert J. Beichner & Saul, 2003; Robert J. Beichner et al., 2007; Robert J. Beichner, Saul, Allain, Deardorff, & Abbott, 2000), Massachusetts Institute of Technology’s TEAL project (Dori & Belcher, 2005; Dori et al., 2003), and the University of Minnesota’s Active Learning Classrooms (ALCs) (Brooks, 2011, 2012; Brooks & Solheim, 2014; Walker, Brooks, & Baepler, 2011; A. L. Whiteside, Brooks, & Walker, 2010). These ALCs typically feature multiple flat-panel screens/projectors, movable tables and chairs, and portable device-based technology that allow flexibility, connectivity, smooth interaction, and dynamic collaboration. With the advent of bringing your own devices for technology-rich instructions, both teachers and learners are able to create a collaborative learning environment.

Consequently, research on ALCs has drawn the attention of educators in the last few years, though there is a limited number of peer-reviewed scholarly articles. Research in ALCs has been conducted in various disciplines such as finance, biology, physics, and chemistry (Baepler, Walker, & Driessen, 2014; Robert J. Beichner & Saul, 2003; Robert J. Beichner et al., 2007; Robert J. Beichner et al., 2000; Brooks, 2011; Brooks & Solheim, 2014). We were not aware of published studies of active learning classrooms in allied health educational settings. Moreover, most of the existing research focused on quantitative results such as course grades, attendance rates, graduation rates, and failure rates. Very little has been reported on findings from a qualitative approach, especially from both faculty and students’ perspectives. A more comprehensive qualitative investigation is needed to further explore the effectiveness of active learning spaces and to provide a more holistic picture of the impact of active learning classrooms.

In 2014, a school within a southeastern academic medical center renovated a traditional classroom and made it into a technology-rich active learning space. The space was aptly renamed the Collaboratory (see Figure 1). It featured 12 large interconnected flat screens and a wall projector that provided an unobstructed view of instructional content from anywhere in the room.

The room was equipped with semicircular and rectangular movable tables with access to power outlets and smart device hookups allowing easy peer interaction and screen sharing among in-room and personal devices. Individual swivel chairs with built-in work surfaces and storage in the tripod base permitted students to orient themselves in any direction for interactive learning. Both large and small portable white boards on rolling stands supported creation, sharing, and display of individual or group work. Within this space, instructors could easily reconfigure from lecture to team work, group presentations, or individual work. Students could quickly huddle or break out, based on the nature of classroom activities.

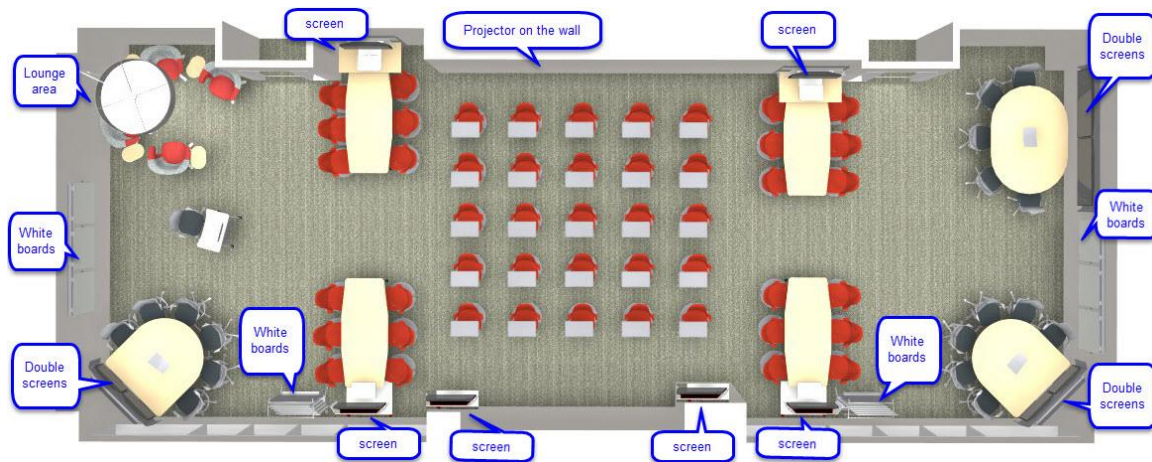


Figure 1: Physical Design of the Active Learning Classroom (Collaboratory)

Given the new learning space, the current qualitative study set out to investigate the impact of this ALC on teaching and learning. We examined activities in the ALC to discover what was taking place in the ALC and how the room affected teaching and learning, and how faculty and students perceived the educational effects of the ALC. Explicitly, our research questions include: 1) How did the Collaboratory contribute to student learning? 2) How did the Collaboratory influence teachers' choice of instructional strategies? To answer these questions, we conducted classroom observations for an entire academic year, held a faculty focus group discussion and distributed student online surveys to gather multifaceted data in hopes of gaining insights into ALCs and providing empirical evidence for future pedagogical reform and classroom redesign.

Literature Review

Active Learning

Educational research since the 1980s has clearly pointed out the inadequacy of the traditional teaching approach and illuminated the need to take student learning into account (Bonwell & Eison, 1991; Laurillard, 2002; Lowman, 1984; Penner, 1984; Steuter & Doyle, 2010; Umbach & Wawrzynski, 2005). Student learning is, rather than a passive action of knowledge acquisition, an active and constructive process where students contextualize and construct new knowledge through prior experiences and social interactions (Piaget, 2013; Vygotskiĭ & Cole, 1978). John Dewey suggested that students should not be perceived as passive recipients of knowledge, instead they should apply knowledge using independent judgement, and be capable of democratic collaboration (M. R. Gregory, 2002). However, in teacher-centered traditional teaching, learning

was controlled and directed by the teacher. Students often just sat and passively listened to the teacher (Chickering & Gamson, 1987; Dupin-Bryant, 2004).

Within this context, increasingly more attention has been paid to the concept of active learning. The term “active learning” was first noted in the literature in the 1980s (AAC Task Group on General Education, 1988; Adler, 1982; Chickering & Gamson, 1987; Cross, 1987; National Institute of Education, 1984; Ryan & Martens, 1989). Alder argued, “All genuine learning is active, not passive. It involves the use of the mind, not just the memory. It is a process of discovery in which the student is the main agent, not the teacher” (p. 50).

Since then, a growing body of research supports positive outcomes associated with active learning. Gibbs (1992) believed that when the learning environment was interactive, students were more intrinsically motivated to comprehend what they were learning and therefore tended to gain deeper understanding of the subject matter. Hake (1998) found that students gained significantly more knowledge from classroom use of interactive-engagement methods than the traditional practice. In a longitudinal study conducted by Felder, Felder, and Dietz (1998), chemical engineering students taught by an active and cooperative learning approach outperformed their traditionally-taught peers in both knowledge retention and graduation rates. Chapman and Belmings’ (2006) quasi-experimental design compared biochemistry students taught by lecturing, group dynamics, and assignment of students to heterogeneous homework groups (treatment group) with those taught in the traditional manner – lecturing only (control group). The results revealed a 23% increase in knowledge retention by the treatment group. Due to the promising outcomes from active learning, many institutions are investing in transforming their traditional classrooms into active learning spaces to support this teaching approach as shown below.

Active Learning Space

When making the shift from a traditional teacher-centered approach to the student-centered active learning approach, a traditional classroom design is not effective, as fixed rows of tables and chairs do not encourage student engagement in learning (Thomas, 2010). Many institutions are leading the efforts of repurposing traditional classrooms into new technology-rich learning spaces. Primary examples that reflect these efforts in the field are North Carolina State University (NCSU)’s SCALE-UP (Student-Centered Activities for Large Enrollment Undergraduate Physics) project, Massachusetts Institute of Technology’s TEAL (Technology-enabled active learning) project, and the University of Minnesota’s Active Learning Classrooms (ALCs).

The SCALE-UP project (Robert J. Beichner & Saul, 2003; Robert J. Beichner et al., 2000) was created to establish a highly collaborative, hands-on, computer-rich, interactive learning environment for a large-enrollment introductory physics course. The SCALE-UP classroom utilized round tables, comfortable chairs, a rectangular instructor station with computer and video presentation system, projectors, laptops, large white boards, and a wireless microphone. Basic course content was delivered through the web. Class time was devoted to difficult problems through hands-on educational activities. Results showed that the SCALE-UP students outperformed their peers in problem-solving, conceptual understanding, and even attitude development. They also demonstrated increased class attendance rates and lower overall and at-risk student failure rates. So far, over 250 institutions in the U.S. and more than 30 universities or colleges across the globe have adopted the SCALE-UP approach (Physical Education R&D Group, 2011).

Developed by the Massachusetts Institute of Technology, TEAL project aimed to increase students' conceptual understanding of physics and decrease failure rates (Dori & Belcher, 2005; Dori et al., 2003). The physical design of the classroom featured movable round tables and comfortable chairs, and multiple large display screens on walls. Teaching activities included a mixture of presentations, group-based desktop experiments, web-based home assignments, and collaborative exercises. Students of TEAL demonstrated higher scores and significantly improved conceptual understanding when compared to peers taught in the traditional lecture setting.

Based on the results of SCALE-UP and TEAL, the University of Minnesota created Active Learning Classrooms (ALCs) that offered faculty and students an interactive and flexible learning environment. The design of the ALCs featured a 360-degree wall-mounted glass-surface marker board, multiple flat-panel projection systems allowing content to be displayed from any laptop, a centered teaching station for master control of physical facilities, and round tables. The relationships of space and student learning, space and pedagogy, space and behavior (Brooks, 2011, 2012; Walker et al., 2011) were explored. Results demonstrated positive impacts of ALCs on course grades, graduation rates, attendance rates, failure rates, and knowledge retention. However, qualitative investigation on what actually happened in the ALCs, how this type of room affected faculty teaching and student learning, and what educational effects the room produced are still lacking in the literature. This study intends to bridge the gap and provide educators with a more realistic and comprehensive view of ALCs.

Methods

Qualitative Inquiry

A qualitative interpretive design was chosen to investigate the impact of an ALC on teaching and learning. Unlike experimental research that deductively tests hypotheses, qualitative research involves the use of interpretive techniques to seek understanding of a phenomenon through participants' perceptions and experiences. Findings are typically derived inductively from data gleaned in the form of themes, concepts or theories (Merriam, 2009, pp. 13-16). In this case, we were interested in understanding the lived experiences of both teachers and students in this new active learning environment. We employed the most well-known data collection strategy – triangulation –to increase internal validity of the study (Merriam, 2009, p. 215) and to obtain a complete picture of the day-to-day educational experiences in the active learning classroom. Audio-/Video-taped observations were recorded for a year with associated field notes. A focus group discussion was conducted with faculty who taught in the ACL, and students who have attended class in the ACL completed a survey with open-ended questions. We determined that an interpretive paradigm provided the most effective method of inquiry to conduct this research.

Participants

In order to find the best qualifying class observation candidate, we examined into the schedule of the ALC from the past academic year to see who had taught there on weekly basis. Five instructors were identified. Among those, only one was scheduled to teach two consecutive courses (Dental Radiology I and II) in the Collaboratory in the academic year (2015-2016). We chose this particular one to be our class observation participant. The rationale was that observing two consecutive courses taught by the same instructor to the same students would provide us with twice

as many opportunities to watch the happenings in the Collaboratory and double our data collection. Towards the end of the academic year, we invited the five instructors mentioned above and three more who had had experience teaching allied health courses in the Collaboratory, a total of eight, to a focus group discussion. Also 275 students of the above eight instructors were invited to participate in an online survey that included open-ended questions.

Data Collection

Upon receiving Institutional Review Board approval for the study, the first author conducted classroom observations throughout the academic year, from which she gained 19 audio-/video-recordings of each class, 95 pages of unstructured field notes of verbal or non-verbal happenings in the classroom, and a manual transcript of 100,000 words in a Word document.

Towards the end of the academic year, we conducted a focus group discussion with eight instructors. The discussion was semi-structured and consisted of thirteen questions regarding lecturing, students' focus and attention, classroom cohesiveness and advice-seeking. These questions were adapted from the faculty focus group discussion guide used by the Learning Spaces Research team at the University of Minnesota (Brooks, 2011, 2012; Brooks & Solheim, 2014; Cotner, Loper, Walker, & Brooks, 2013; Walker et al., 2011; A. Whiteside, Walker, & Brooks, 2010; A. L. Whiteside, Jorn, Duin, & Fitzgerald, 2009). The discussion lasted two hours and the manual transcript contained 18,000 words in a Word document.

In the meantime, we distributed a 25-question online survey adapted from Park and Choi's study *Transformation of classroom spaces: traditional versus active learning classroom in colleges* (2014) to 275 students who took classes from the above faculty in the Collaboratory. One open-ended question [Do you prefer to take classes in the active learning classroom (ALC) or traditional classroom (TC)? Explain your answer] in the survey was included for analysis in this paper. Approximately 70% of students ($n=193$) responded to this open-ended question.

Data Analysis

We employed a constant comparative method (CCM) to analyse data from the faculty focus group discussion and student open-ended question. This methodology is often used to compare data from open-ended questions, interviews or focus group discussions (Glaser, 1992; Glaser & Strauss, 1967; Strauss, 1987). We followed a defined process (Savin-Baden & Major, 2013) by first identifying the most frequently used words and phrases to develop major categories. These were then identified in the transcripts and open-coded. Next, a constant comparison of codes and quotes was conducted to find consistencies and discrepancies. We examined the recurring codes and refined initial categories. Once those initial categories were developed, we checked against our class-recording transcripts and field notes to confirm the validity of these categories. Finally, five themes were determined to be the central focus of the subject matter.

Trustworthiness

To ensure trustworthiness of the study, we used the triangulation strategy in our data collection. We collected data from three different channels: field notes from class observations, a faculty focus group discussion and an online student survey. All three sources of data were brought together to elaborate and corroborate the research in question. Also multiple investigators were involved in

the data analysis. The first and second author independently analyzed the data. The third author reviewed their results and discussed all discrepancies with the other two. All three authors agreed on the final five emerged themes presented in this paper.

Organization of Results

Analysis of data resulted in the development of five interrelated themes. These themes will be presented as they emerged from the data along with supportive narrative.

Results

The result section is organized by themes that emerged from the data analysis process. The five overarching themes were positive environment, depth of engagement, classroom interaction, efficiency of group activities, and development of creativity. Excerpts selected from the transcripts are provide as representative quotations to support each theme represented.

Positive Environment - The physical features of the Collaboratory created a positive environment for teaching and learning.

Physical features of a learning environment are an integral part of teaching and learning. In this study, we observed that the physical features of the Collaboratory including – open layout, comfortable chairs, spaciousness, and brightness of furniture colors have helped make people feel more welcomed and relaxed.

One instructor brought up an example of new student orientation in the Collaboratory. She said:

When we oriented to the DHA [i.e. Doctor of Health Administration] program, we did our orientation up there and what I found was that because of that setting, the way we had our chairs set up, you know, I was meeting people I have never met before and so that was a good way to kind of break the ice, a little more welcoming environment, again, rather than staring at the back of somebody's head, to, to get to know somebody.

Students responded in a similar fashion. They made comments like:

(I prefer) ALC. I like the change of scenery, the more technologically advanced seating and slide presentation. It is great for group work and seems more relaxed and self-driven than traditional classrooms.

Student Engagement - The design of the Collaboratory allowed mobility and promoted student engagement.

Student engagement is of global importance in any education setting. The typical traditional classroom design contains rows of tables and chairs, all facing the lectern in the front. Many have tables and chairs bolted down to the floor and nothing is movable. In the Collaboratory, however, every piece of furniture is movable. Workstations are spread all over the room facing different

directions so students no longer have to squeeze in between tables and chairs to get to a seat and there is plenty of space for everyone to move about. One instructor said:

We don't even talk in the same spot. We might be in the corner, we might be in the front, we might be behind them in a different corner. There is no hierarchy, you know, there is no the front and the back, or the sides... And they are committed. We don't have a lot of coming and going like we are in in a regular classroom... I mean even because it's more open, you think they would come and go more, they don't because they are engaged. So I just, I feel like they are really with you more.

Students' responses echoed instructors' observations. They believed that they could stay engaged in the Collaboratory. Supportive quotes include:

(I prefer) active (learning classroom) because it keeps me engaged and I'm not just sitting there listening to someone talk for hours. I can be moving and talking and thinking out loud.

From the year-long classroom observations, we noted that the majority of students, rather than passively listening to lectures or doing things unrelated to class, were constantly found underlining or highlighting handouts, taking notes, asking or answering the instructor's questions, which further supports the theme of student engagement.

Classroom Interaction - The non-hierarchical design of the Collaboratory democratized learning and enhanced classroom interaction.

Enhancing classroom interaction has been a major focus of many educators. Since the Collaboratory does not have a focal point, it does not present the hierarchical structure as the traditional classrooms do. Instructor comments included:

I think what's important about this space is that, I am going to use word that, I don't know, I just feel like I really want to say this, it democratizes learning. I used to teach in an environment where you had students line up at their desks looking to getting help. You are like 'how inefficient is this?'

With the freedom to move about in the room due to the mobility of furniture and open layout of the Collaboratory, the students felt that they could interact more with each other during class. Typical quotes supporting this position include:

- I can interact more with my classmates and the material, I get more work done, and I learn better by doing, so working on projects in class helps me learn the material better.
- ALC (allows for) more discussion and more interaction with other students and teachers, which is a critical component in the future setting of our career.

Examples found from video-recording transcripts and field notes fortify this finding. In the classroom, we could see how human to non-human (e.g. class content) interaction was

accomplished through the use of advanced technology in the room. Classroom content was often projected on all twelve screens to create an uninterrupted view from anywhere in the room. The instructor used an iPad to control or give control of screens. On many occasions, she asked students to google the topic of interest and gave students control of screens so that they could share, discuss and present what they had found on the topic from their smart devices. They also used Canvas, tutorial videos, and emails for additional virtual interaction. Human-to-human interaction was demonstrated through group discussions, role-plays, group presentations, and peer teaching. For example, during one class, the instructor divided students into four groups and asked each group to create role-plays of good and bad examples on four respective topics – verbal communication skills, non-verbal communications skills, facilitation skills and listening skills. Googling of terms or similar examples was encouraged. The field notes suggested that ‘the room was full of laughter. The students were engaged...even the ones who usually don’t look (at the instructor) were engaged.’

Group Activities - The Collaboratory provided students with a more effective workspace for group activities than traditional classrooms.

Effective learning cannot be accomplished without working with peers in group activities. Traditional classrooms oftentimes fail to provide an effective workspace for the implementation of group activities. Both faculty and students in this study agreed that group activities work very well in the Collaboratory. One instructor mentioned that they often broke out into small groups for activities, and she said:

Once we got in our small groups, it was like everything else, we would just totally (have) blended out and we were just totally into what we were working on and that room fit a lot of folks in it, and everybody was engaged in their group, so I think the design helped in that matter.

Many students’ responses indicated that they preferred the Collaboratory just because how easy group activities could be executed, mainly due to the presence of advanced technology.

If working in groups, I prefer to work in the active learning classroom. It's easier to break into groups, and we can all look at the monitor (that the computer is hooked up to) while one person is working on the computer instead of everyone hovering around the computer to look at the screen. Also, at some areas you can add two computers if there are two monitors which is great when working on research projects.

The example presented above under classroom interaction is also a prime example of group activities taking place in the Collaboratory. They are the further proof of the effectiveness of the space for group activities.

Creativity - The environment of the Collaboratory fostered the development of creativity.

Creativity was placed on the top of the learning pyramid and considered as the ultimate learning objective, according to Bloom’s Taxonomy (Anderson et al., 2001). In this study, instead of

lecturing, quite a few instructors mentioned that they used the Collaboratory as an opportunity to involve students in higher-order thinking. One said,

The environment itself, besides the change from the rows, you know, a lot what ask them to do in there is to think and create something. And so, um, it's also, we really stress these, the team, because in, that's a huge part of our content as you each have something different to contribute to this team, to think outside the box for these research projects.

The students found the Collaboratory conducive to creativity as well. One student said, (I prefer) ALC, because the atmosphere is different. There is a creative vibe in the room.

To support this finding, we found a noteworthy example from the class observations. During a peer teaching activity, one group creatively explained magnification and distortion of x-ray images through shadow casting. They used the flash light feature on the cell phone to cast light over a blank white board and vividly demonstrated the relationship among positioning of x-ray tube, distance and x-ray images.

In summary, both instructors and students enjoyed the welcoming and relaxing environment of the Collaboratory. They all believed that the Collaboratory promoted engagement, amplified interaction, enhanced group activity efficiency, and fostered the development of creative ideas.

Discussion

Results from the current study indicated that the physical features of the Collaboratory created a positive learning environment for both the faculty and students. According to Graetz (2006), the physical features of learning environments could affect learners emotionally and lead to important cognitive and behavioral consequences. Environments that induced positive emotions facilitated learning, whereas noisy, crowded and uncomfortable spaces could cause discomfort and interfere with learning. Williams, Childers, & Kemp's (2013) study concurred with Graetz' statements and the current study's findings. They discovered that a positive relationship existed between the physical surroundings of the classroom and students' positive emotions in the classroom. Also in the same study they revealed that positive emotions in the classroom are positively related to student academic success. Since the Collaboratory induced a positive environment for both the faculty and students, we can infer that the learning environment of the Collaboratory should facilitate learning and potentially contribute to future learning success.

The results of the current study also indicated that students appeared to stay more engaged in the Collaboratory than they normally would in the traditional classroom, which is in line with Smith and Cardaciotto's finding (2011). Student engagement represents time and effort students devote to academically meaningful activities that are conducive to learning and personal development, and what institutions do to facilitate students' participation in such activities (Delialioğlu, 2012; Kuh, 2009). Student engagement has emerged as a major focus of educational objectives in higher education globally (Harper & Quaye, 2009), as positive correlations have been identified in previous studies between student engagement and student satisfaction levels of their academic experiences, drop-out rates, learning outcomes and overall educational quality (Coates,

2008; Greenwood, Horton, & Utley, 2002; Legters, Balfanz, & McPartland, 2002; Perie, Moran, Lutkus, & National Center for Education Statistics, 2005).

As mentioned previously, the year-long classroom observations showed that the majority of students, instead of passively listening to lectures, were often found underlining or highlighting handouts, taking notes, asking or answering the instructor's questions. According to the ICAP (Interactive, Constructive, Active and Passive mode of engagement) Framework proposed by Chi & Wylie (2014), passively listening is categorized as a Passive Mode of Engagement; underlining or highlighting handouts, taking verbatim notes an Active Mode of Engagement; asking and answering questions are all Constructive Modes of Engagement. They believed that passive modes of engagement produced only minimal understanding of knowledge, whereas active modes induced shallow understanding and constructive modes generated deep understanding and potential knowledge transfer. The higher level of student engagement in the Collaboratory should contribute to deeper understanding of subject matter than habitual passive learning in traditional classrooms.

Results of this study also suggested that the non-hierarchical design of the Collaboratory was instrumental in enhancing classroom interaction, which supports Brooks' study finding that class discussions occurred 48% more in the ALC than in the traditional classroom (Brooks, 2012). As stated previously, human and non-human interaction was mainly accomplished through the use of advanced technology in the room, and human-to-human interaction was demonstrated through group discussions, role plays, group presentations, and peer-teaching. Based on the ICAP Framework by Chi & Wylie (2014), all those interactive examples were considered Interactive Modes of Engagement that should produce the deepest understanding and the potential to innovate novel ideas. Enhanced interaction in the Collaboratory should further deepen an understanding of the course content and lead to potential innovations.

The examples of interactions, discussed within the classroom interaction theme, are also prime examples of group activities taking place in the Collaboratory. The result of the current study indicated that both instructors and students expressed their preferences over this active learning space and were in consensus that the space had improved the efficiency of group activities. Group activities have been extolled in higher education as an effective strategy to improve engagement and promote interpersonal, decision making, problem solving, time management, and critical thinking skills (Bonwell & Eison, 1991; Johnson, 2013; Koh, Wang, Tan, Liu, & Ee, 2009; Swaray, 2012). Positive effects of group activities have been reported in several studies. Smith and Cardaciotto (2011) reported that active learning group work contributed to greater knowledge retention and student engagement. Swaray (2012) found in his study that the majority of students (78%) believed that group activities encouraged them to work effectively with other students, which concurs with the student statements from the current study. He also revealed that students believed group activities were inspiring, motivating, and conducive to the development of work-related skills.

Creativity has gained increasing attention in education settings and has been considered as one of the most vital skills that help prepare students for future success (Craft, 2011; de Alencar & de Oliveira, 2016; E. Gregory, Hardiman, Yarmolinskaya, Rinne, & Limb, 2013). Its importance can be seen from the revised Bloom's Taxonomy that defined "creating" as the ultimate learning objective (Anderson et al., 2001). Students with creative abilities, according to Davis and Rimm (2004), outperformed students with a high IQ in lifetime achievements. In this context, nurturing creativity has become one of the most valued, though often unrealized, educational goals (Beghetto

& Kaufman, 2014). The finding from this study infers that the Collaboratory can potentially drive us closer to the fulfilment of this goal.

There are some limitations to this study. First, the study was conducted in a newly built ALC. The novelty could have contributed to some of the positive effects but may wear off with time or emergence of newer technology. Second, though the study included faculty from quite a few different disciplines, the participants were all from one school within a medical center. Existing ingrained culture within the school could have played some role in some of the study findings. Third, the study only made observations in one teacher's classes during the academic year. Future researchers are encouraged to conduct similar studies with multiple teachers from different disciplines or institutions using different ALCs, which will further enhance our understanding of active learning classrooms.

Notwithstanding these limitations, the use of several data sources including field notes from a year-long observation, focus group discussion with faculty, and student surveys, makes this study a rich investigation of the impact of the active learning classroom. All the emerged features of the ALC - greater teaching and learning enjoyment, deepened engagement, amplified interaction, enhanced group activity efficiency and fostered creativity - are synergistically interrelated and hold important implications for future pedagogical reform and classroom redesign.

Appendices

Appendix 1. Faculty Focus Group Questions.

Introduction:

Brief introduction of the researcher. Brief explanation of the current study and the purpose of the interview.

Questions:

Poll: How many total courses have you taught in the Collaboratory? What courses are they?

Lecturing Questions:

We know that the design of the Collaboratory is very different from the traditional classrooms. Students do not sit in rows at fixed tables all facing the instructor.

Q1: What in particular makes lecturing in these spaces challenging?

Q2: In your opinion, what are the biggest fixable problems with the room?

Q3: Can you articulate what is important about the active learning space?

Q4: Can you give me an example of what worked particularly well in the room?

Q5: Did the room change how you addressed your teaching objectives?

Q6: How did having a technology-enabled room – wireless access, plasma screens for every table, projection capability – prompt you to change your previous teaching practice?

Q7: Has the room and the way that you teach in it changed anything about your assessment practices? Do you do more group assessments, for example? Do you collect different data or evidence of achievement?

Q8: Generally, did the room change what you do in other classrooms? That is, did you or do you intend to carry over anything you do in the Collaboratory to teaching in more traditional rooms?

Focus and Attention Questions:

We've heard that some students have difficulty focusing on who is speaking or keeping track of what is going on. The sight lines are such that they don't always face the same direction and can lose track of who is speaking or what is being written on the board or referred to on the screen.

Q9: Did you find this to be true? How did you recognize that students were unable to focus? Do you do anything to help them with this problem?

Q10: In contrast to more traditional styles of rooms, do you find students to be more easily distracted in the Collaboratory? Again, have you tried to address this in any way?

Classroom Cohesiveness:

Q11: What was your sense of the classroom community? In your opinion, did the students in the Collaboratory seem to be more friendly or collegial with each other than in other rooms? What did you notice that would suggest this?

Advice:

Q12: What physical features of the room do you think need to be improved?

Q13: What do you wish you had known before teaching in the Collaboratory for the first time? What advice would you give instructors teaching in the room for the first time?

Appendix 2. The Impact of Learning Spaces on Student Learning Survey.

(Note: The content of this survey was delivered via an online survey tool - Qualtrics)

Dear students,

We would like to evaluate your satisfaction/dissatisfaction levels regarding different learning spaces (Active Learning Classroom, i.e. the Collaboratory vs. the traditional classroom) to determine whether the difference in space affects student learning.

Thank you for your participation!

★ This survey will take you approximately 10 minutes to complete.

I. Participant information

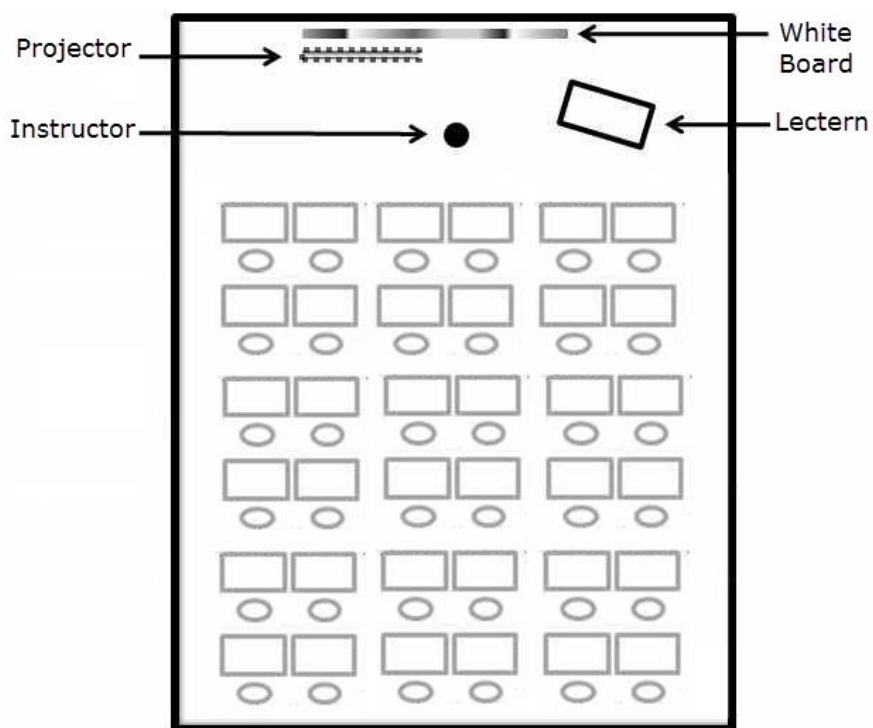
1. What program are you in? ① Dental Hygiene () ② Occupational Therapy ()
③ Physical Therapy () ④ Medical Laboratory Science ()
⑤ Radiology Science ()
2. Gender ① Male () ② Female ()
3. Race ① White () ② African American () ③ Asian/Pacific Islander ()
④ American Indian () ⑤ Hispanic or Latino ()
4. GPA: ① 2.5-2.9 () ② 3.0-3.4 () ③ 3.5 – 3.9 () ④ 4.0 or greater ()

5. Check the appropriate box.

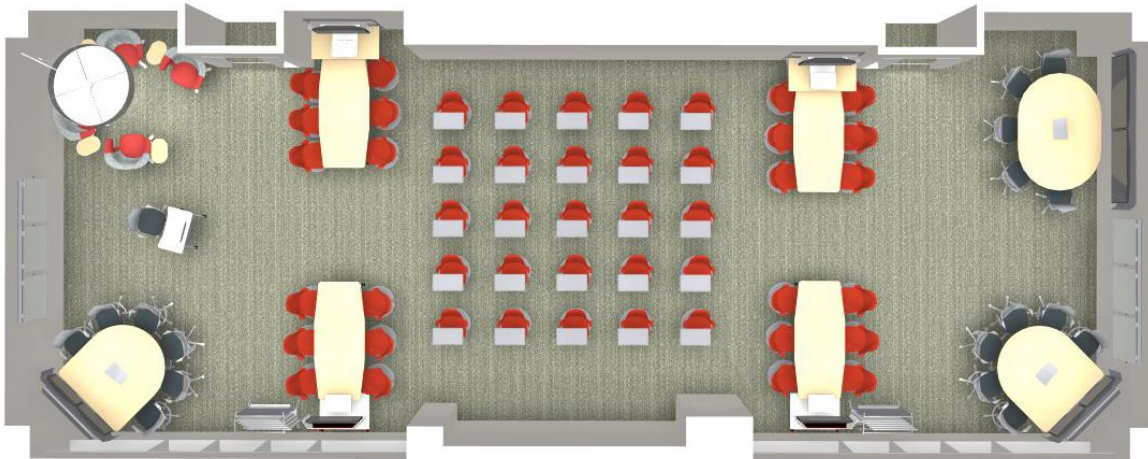
Items	Strongly disagree	Disagree	Moderate	Agree	Strongly agree
① I have strong confidence in my learning ability.	1	2	3	4	5
② I prefer assignments requiring creativity.	1	2	3	4	5
③ I am willing to raise my hands and ask questions in class.	1	2	3	4	5
④ I think gaining knowledge is more important than receiving high scores. () I think receiving high scores is more important than gaining knowledge. ()					

II. Educational effects of the active learning classroom (**ALC**) and traditional classroom (**TC**).

Design of the traditional classroom (**TC**)



Design of the active learning classroom (ALC, known as the Collaboratory).



The items presented in the table below intends to analyze the educational effects of ALC and TC. Please check the appropriate box.

Items	Classroom type	Strongly disagree	Disagree	Moderate	Agree	Strongly agree
1. I have a clear view of the screen from anywhere in the classroom.	TC	1	2	3	4	5
	ALC	1	2	3	4	5
2. I prefer to seat as close as possible to the instructor.	TC	1	2	3	4	5
	ALC	1	2	3	4	5
3. The instructor devotes more time to discussion/group activities than lecturing.	TC	1	2	3	4	5
	ALC	1	2	3	4	5
4. I can maintain my concentration in class for a long time.	TC	1	2	3	4	5
	ALC	1	2	3	4	5
5. It is easy to get the instructor's attention to ask questions.	TC	1	2	3	4	5
	ALC	1	2	3	4	5
6. The learning space provides effective space for group activities.	TC	1	2	3	4	5
	ALC	1	2	3	4	5
7. The learning space enhances the efficiency of group projects.	TC	1	2	3	4	5
	ALC	1	2	3	4	5
8. It is easy to exchange information and share different viewpoints with other students.	TC	1	2	3	4	5
	ALC	1	2	3	4	5
9. It is easy to interact with the instructor.	TC	1	2	3	4	5
	ALC	1	2	3	4	5

10. The learning environment is conducive to the development of creative ideas.	TC	1	2	3	4	5
	ALC	1	2	3	4	5
11. I can retain newly taught course materials well.	TC	1	2	3	4	5
	ALC	1	2	3	4	5
12. I have strong motivation for learning.	TC	1	2	3	4	5
	ALC	1	2	3	4	5
13. I do things unrelated to the class (playing on the cell phone, talking with other students, etc.)	TC	1	2	3	4	5
	ALC	1	2	3	4	5
14. I feel sense of belonging to the class and have a close relationship with classmates/instructor.	TC	1	2	3	4	5
	ALC	1	2	3	4	5
15. I think class is fun and look forward to it.	TC	1	2	3	4	5
	ALC	1	2	3	4	5

III. Other questions.

1. Do you prefer to take classes in the ALC or TC? ALC () TC ()

→ Explain your answer?

①

②

2. What features in the ALC do you like the best?

①

②

3. Do you think we need to build more ALC classrooms? Yes () No ()

4. What can we do to improve your learning experience in the ALC? Any suggestions?

①

②

※ Thank you for participating in this survey.

Appendix 3. Sample Field Notes

2/10 P3
 [Dropped film corner] ^{Correct/incorrect} demonstrate the chin positions.
 [T is right. Even when demonstrating, SS do not look at her.]
 [Incorrect horizontal angulation] Get a pen and highlight the picture on the slide. (At the right rectangular table)
 [Get the laser on PPT to point to area of interest.]
 Example: Take pictures with cell phone.
 foreshorten image.
 elongated image.
 [SS at the left semicircular table do not look most of time. Maybe because they are facing opposite direction. ^{SS} look their backs against the teacher.]
 [Use laser feature on PPT to point to area of interest on slide.]
 XXX wants to know.
 [Pick up one student at the right rectangular table to find the angle on the grading sheet.]
 [One student at the left semicircular table rarely looks at teacher. She is writing on her hand even when everyone else is engaged, talking and laughing.]

2/24 Wed. P1
 Chapter 12/13 Patient Relations and the Dental Radiographer
 10:05 started a little late due to printing issues
 (4) 0 3 18
 6 5
 10:07. Students google key terms on the slide
 "chairside manner"
 communication
 facilitation skills
 interpersonal skills
 patient relations
 students assign roles and ^{Prof. Set this for 5 mins} create a scenario.
 Prof. hands out copy of questions.
 a student raises hand to ask a question (at the left semicircular table)
 Students work with others at the same table.
 3 mins left (Prof. reminds everyone)
 Prof. leads in to listen to discussion at left rectangular table

2/24 P2
 2 mins left. (Prof. reminds SS).
 10:12 Teacher walks to the corner to talk to the 3 students.
 Heated Discussion. Students laugh & talk.
 1 min left.
 Times up (10:13)
 ① Right rectangular table goes first. Role play starts. 2 10:16
 2 groups of students ^{3 students 1 parent 1 bad} sit at same table. ^{good listening} act out.
 ② 2nd group. (Students from the corner): Prof. explains why it's good. bad. bad.
 ③ 3rd group. (left semicircular table). divide in 2 groups. (2 in dark, 2 in light).
 non-verbal communication. bad example. good.
 ④ 4th group. (divide in 2 groups) 3 in each group. bad facilitator. bad non-verbal. good.

3/16 P3
 11:27. 2nd group goes. Quantity
 All SS gather around the central area in a circle, this time so that they can see/hear.
 2nd group is next using screens. Just the white board.
 Teacher asks questions when needed or confirms with them about the meaning of what they say.
 Take note all other SS what the heart represents.
 High milligrams. → dark heart.
 Low → lighter heart.
 "That was a good example"
 Teacher asks if anybody has questions.
 3rd group.
 Before 3rd group goes, Teacher recaps.
 11:31 3rd group. Quality
 3rd group uses WB, no screens.
 [Teacher asks everyone not to erase board so that they can take pics later.]

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Supporting and Mentoring New Social Work Instructors: A Formative Evaluation of the TEAM Program

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Abstract: This study provides formative evaluation results from a pilot peer mentorship and teaching support program designed, implemented, and evaluated at a school of social work located in a major Midwestern Carnegie research I (RI) university over a 3-year span. Through utilizing an adult learning approach, the Teaching Excellence and Academic Mentorship (TEAM) program was created as a way to foster community among first-time instructors at the school in order to promote peer support and mentorship in the classroom. The qualitative results of this study indicate agreement among new instructors that peer support and mentorship were helpful during their first year of teaching at the school. Additionally, results point to new instructor concerns about creating a culture for teaching at an RI institution, faculty buy-in or commitment to mentorship, and long-term options for continued mentorship and support in the classroom beyond their first year.

Keywords: teaching mentorship, higher education, social work education, teaching communities.

The challenges associated with first year teaching are well known by faculty and administrators of colleges and universities. Little has been written about what is being done by institutions of higher education to help strengthen the capacity of new instructors to succeed in the classroom, especially at RI institutions that often prioritize research over teaching outcomes (Richardson, 1992; St. Claire, 1994). During the past decade, the percentage of courses taught by part-time faculty and graduate students has increased 40-65% across institutions of higher education (Boyle & Boice, 1998; Richardson, 1992; Savage, Karp, & Logue, 2004). The steady increase and demand for qualified part-time instructors and graduate teaching assistants has led to a renewed interest in new instructor preparation and mentorship (Gaia, Corts, Tatum, & Allen, 2010). While part-time instructors and graduate students often hold increased responsibilities for teaching courses at many schools across the country, teaching is also a requirement and expectation for most new tenure track and tenured faculty as well.

Although new faculty are expected to teach anywhere between 1-4 courses a semester, depending on the institution, many have very little, if any, experience teaching in higher education, particularly at the graduate level (Sands, Parson, & Duane, 1991; Thomas, 2005). While some new faculty members may have taught or co-taught courses during their doctoral or graduate programs, those who attended research-intensive doctoral programs were likely only mentored by experienced faculty in research, not in teaching (Boyle & Boice, 1998; Gaia, Corts, Tatum, & Allen, 2010). One way that programs and institutions are addressing the needs of new instructors is through the development of peer mentorship programs and intentional teaching communities (Schonwetter, & Nazarko, 2009). Mentorship programs provide support to new instructors in many different ways, however, in a survey conducted by Ohio State University on

instructors' perception of mentorship, only 33.3% of instructors across instructional levels stated that they were mentored during their time as an instructor (Sands, Parson, & Duane, 1991). Mentorship programs provide new instructors with necessary connections for meeting other faculty and staff, receiving feedback on teaching, social support, and knowledge about informal norms or rules (Popper, 2007; Savage, Karp, & Logue, 2004; St. Claire, 1994).

New instructors in the school of social work where this article is based, experienced most of the challenges described in the literature, which over time, led to modest declines in student evaluation scores of new instructors, lower retention rates among part-time instructors, and increased student complaints made to administration about the performance of new instructors. As a result of these challenges, the Teaching Excellence and Academic Mentorship (TEAM) pilot program was created through collaboration between an administrator and part-time instructor at the school. TEAM was designed to provide resources, support, and peer mentorship to new instructors at the school during their first year, regardless of whether they were faculty, part-time instructors, or doctoral students. Another purpose of the program was to build an intentional teaching-centric community among new instructors, which would eventually begin to draw in participation from experienced faculty and instructors. The evaluation hypothesis behind TEAM was that if the school supported new instructors in teaching and getting acclimated to the school and university, it would help to improve the quality of teaching in the classroom, increase retention rates among part-time instructors, and build a more supportive culture for teaching in the school. As part of the overall evaluation of TEAM, qualitative data was collected over the course of 3 years from regular check-in meetings and end of the year reflection sessions. The purpose of the qualitative portion of the evaluation was to gather data about the specific benefits and gaps within the current program in order to improve it in the future. Another purpose behind the check-in meetings and end of the year reflection sessions was to better understand the experiences and needs of new instructors. The qualitative results from the first 3 years of the TEAM program are shared in this paper for the purpose of modestly helping to inform other schools and programs interested in helping support the teaching of new instructors more effectively.

Literature Review

The literature on the benefits of mentorship in higher education is plentiful (Savage, Karp, & Logue, 2004). Mentorship, however, is defined very broadly throughout the literature of higher education and social work education (Savage, Karp, & Logue, 2004). Mentorship in higher education is best paraphrased in the literature broadly as formal and informal processes, activities and initiatives aimed at supporting faculty and staff in professional development (Gaia, Corts, Tatum, & Allen, 2010). The activities and supports provided through mentorship programs in higher education often overlap with institutional support programs but differ in that mentorship programs usually involve building supportive relationships between faculty and staff to promote professional learning and growth (Hudson, P. Hudson, S. Gray, & Bloxham, 2013). Some of these supports include; new instructor orientations, faculty development trainings, appointed mentors, and peer mentorship communities of support (Boyle & Boice, 1998; Sands, Parson, & Duane, 1991). Successful mentorship programs often lead to; higher retention rates for part-time instructors, better student learning experiences, more confident instructors, better-prepared future faculty, and a greater sense of connectedness and community among faculty and staff (Luna & Cullen, 1995; Popper, 2007).

Approaches to Mentorship

Two major approaches to mentorship program structures primarily exist in the literature. The first type of mentorship program is the formal mentorship program, which is generally characterized by increased structure, institutional buy-in, formal activities, sometimes mandates to participation, and are often tied to assessment and evaluation of instructor performance in the classroom. The second type of mentorship program is less formal and voluntary in nature. Voluntary mentorship programs are often peer initiated and facilitated, are more centered on the individual learning needs of instructors, receive very little formal support from institutions, and tend to emphasize building intentional supportive relationships among peer instructors, rather than focus primarily on improving instructors' teaching (Heñard & Roseveare, 2012; Kalish, 1997; Gross & Stovall, 1994; Savage, Karp, & Logue, 2004).

While formal programs provide a consistent message, curriculum, and skill development to new instructors, these programs are often critiqued by instructors as not being flexible enough to take into account the unique and emerging individual needs of instructors (Sands, Parson, & Duane, 1991; Ebersole, 2003). Mentorship that occurs more informally allows for the emergence of instructor needs, but may not always meet the needs of new instructors as a result of being dependent upon new instructors self-identifying and voicing their needs as well as experienced instructors making the time and putting forth the effort to provide support (Cox, 2004; Gross & Stovall, 1994; Schonwetter & Nazarko, 2009). While an informal mentorship program, may on the surface, seem like the more attractive structure for promoting community and teaching excellence among new instructors, it is important to consider deeper level concerns about the accessibility of mentorship to new instructors. Although many institutions, schools, and departments claim to support and encourage mentorship, including most schools of social work, often it is done through informal mechanisms. The major drawbacks of not formalizing mentorship, however, is that women and minorities often experience isolation from existing faculty and may not feel comfortable reaching out due to concerns over institutional racism, sexism, and power dynamics (Sowers-Hoag & Harrison, 1991; Simon, Bowles, King, & Roff, 2004). It is also true that many new instructors are readily aware of the hierarchy of power that exists in most institutions between non-tenured and tenured faculty and as a result may not feel comfortable being vulnerable to colleagues who could have decision-making power over their professional trajectory at some point (Wilson, Valentine, & Periera, 2002).

Finally, new instructors may not always realize the benefits of mentorship, unless they had positive experiences with mentoring relationships in the past (Savage, Karp, & Logue, 2004). It is also true that many new instructors across levels routinely underestimate how difficult teaching can be, especially in a new institutional setting, thus making it imperative that formal mechanisms are established by the institution to support the mentorship program (Wasserstein, Quistberg, & Shea, 2007). While it may be difficult in current economic times to secure funding for the support of more formal teaching mentorship programs, small scale changes and improvements can go a long way in establishing a culture of support and teaching excellence in higher education. This is particularly the case when there is buy-in and commitment to supporting mentorship from administration and instructors alike (Klein, Weisman, & Smith, 1996; Wilson, Valentine, & Periera, 2002).

In addition to understanding the typical structures for successful teaching mentorship programs, another consideration that many institutions and administrators must contemplate is the extensive and varying needs of new instructors across ranks or categories.

Graduate student instructors. Doctoral students play an important role in the future and present of social work research and education. Doctoral programs typically cast doctoral students into one of two distinct roles; graduate research assistants or graduate student instructors (Gonzalez, 2001). It is often difficult to determine by merely looking at a school of social work's ranking or prestige as to which model they follow with graduate students. Often larger programs with strong research interests may utilize doctoral students to assist faculty conducting extensive research projects, both as a source of much-needed labor for faculty and as part of the curriculum and/or funding package provided to graduate student (Gaia, Corts, Tatum, & Allen, 2010). At other times, schools may depend on graduate students to teach foundation courses in order to help alleviate the teaching burden of tenured and tenure-line faculty members, who often have intensive research, committee service, advising, and other requirements placed upon them (Gonzalez, 2001).

Graduate and doctoral programs that utilize teaching assistants provide various levels of mentorship and support to students (Gaia, Corts, Tatum, & Allen, 2010; Wasserstein, Quistberg, & Shea, 2007). Most doctoral programs provide some form of orientation to student instructors, which usually consist of a minimum of content related to institutional policies, grading, basic technology, and expectations. Additionally, some schools provide increased content related to developing and implementing curriculum, teaching philosophy, classroom management training, and addressing sensitive topics and conflict in the classroom (Boyle & Boice, 1998). Lastly, what is known about the teaching preparedness and mentorship of doctoral students is that while many schools and programs are doing something to orientate and support doctoral students in classroom teaching, there are wide variations in what is being done (Gonzalez, 2001). Often doctoral students are mentored in research and scholarship, but not directly in the area of teaching (Boyle & Boice, 1998; Popper, 2007). Additionally, while some program directors and faculty are writing formally about the positive outcomes and challenges of preparing and mentoring doctoral students for classroom success, many are not publishing beyond an institutional level (Savage, Karp, & Logue, 2004).

New faculty members. The next largest group that schools of social work, and many others, are investing resources in is new faculty members. New faculty members provide fresh perspectives, current best practices, and technological innovations that are beneficial to programs and institutions (Luna & Cullen, 1995). New faculty members generally receive some formal orientation process at the university and/or department level. The focus of orientation is to familiarize faculty to their new surrounding and the organizational culture and formal policies of their employer institutions (St. Claire, 1994). Some departments, schools, and programs have developed concrete supports for new faculty members, which may include pairing them with a senior faculty member, providing them with small research incubation grants, and focusing on what it takes to meet tenure demands (Boyle & Boice, 1998; Cameron & Blackburn, 1981).

Although many schools evaluate teaching, research, service, and sometimes fund development in some form when determining tenure and promotion of faculty members, more focus in recent years has been placed on research and fund development, especially at RI institutions (Popper, 2007). While the literature also states that some emphasis on teaching preparedness and support is provided to new faculty members, most of the emphasis for teaching specific support takes place at community college and teaching centered institutions and

programs (Sands, Parson, & Duane, 1991). The lack of formal literature, especially in social work, about what is being done to promote and encourage teaching excellence among new faculty members, especially those at RI institutions, presents a gap in the knowledge base of higher education.

Part-time faculty. By far, the group of new instructors that are at the greatest deficit for mentorship and support are adjunct faculty or part-time instructors. Almost all institutions utilize part-time instructors to fill the instructional needs of institutions (Friedlander, 1980; Hénard, & Roseveare, 2002). Part-time faculty are especially relevant to social work, nursing, and teaching programs, where real world expertise and experience is needed in curriculum and practicum-based courses (Richardson, 1992). Part-time faculty currently teach anywhere from 40-70% of the teaching load at many schools, with community colleges generally reporting higher proportions of courses taught by part-time instructors than four-year colleges and universities (Richardson, 1992; Savage, Karp, & Logue, 2004). Although community colleges may utilize part-time instructors in higher proportions than four-year institutions, according to the American Association of University Professors (AAUP), more than 51% of university teaching is now being handled by part-time or adjunct instructors (AAUP, 2015).

Although part-time instructors play an important role in teaching the next generation of professionals, they receive the least amount of attention in the literature and are given the fewest supports and resources at most institutions (Schonwetter & Nazarko, 2009). Part-time instructors in social work are typically practicing or recently retired practitioners that are seeking an opportunity to give back to the profession (Klein, Weisman, & Smith, 1996). While many part-time instructors teaching for the first time have extensive professional practice experience, they have little teaching preparedness or experience in academic environments (Fagan-Wilen, Springer, Ambrosino, & White, 2006; Klein, Weisman, & Smith, 1996). There is not a great deal of discussion in the literature of higher education about the rationale for not providing better support to part-time instructors in the classroom through mentorship; however, it has been suggested by some that funding cuts, tighter budgets, and increased focus on funded research may contribute to the lack of investment in the development of part-time faculty (AAUP, 2015; Schonwetter, & Nazarko, 2009).

It is the result of the many challenges faced by all categories of new instructors illustrated in the literature, and experienced firsthand by the authors, which led to the creation of the Teaching Excellence and Academic Mentorship program (TEAM) to support new instructors across ranks and levels during their first year of teaching in the school.

Program Overview

The TEAM program was designed to provide increased teaching specific support and mentorship to first-year instructors at the school. The first step to improving institutional support to new instructors was achieved by creating a comprehensive six-hour orientation program. The orientation consisted of content and exercises specific to teaching, as well as activities meant to build community among new instructors. Guest speakers from inside the school and university were brought in to help new instructors better understand university technology systems, library resources, human resources, and existing teaching supports. Student panels were also included in the orientation sessions to help new instructors understand student perceptions about quality teaching and instructors.

An additional critical component of the TEAM program was the utilization of a peer facilitator as a mentor to new instructors. The peer facilitator, also referred to as the peer mentor, was a part-time instructor with stellar teaching evaluations, experience, and additional training specific to teaching in higher education. The peer facilitator was readily available and accessible to new instructors throughout their first year, and helped coordinate and co-lead regular check-in meetings, while also working to connect new instructors with other quality instructors in the school for long-term mentorship opportunities. Another component of TEAM was the utilization of regular check-in meetings at the beginning, midway point, and end of the year. The check-in meetings were held each semester as a means for processing, learning, and troubleshooting potential issues new instructors were experiencing. An adult education approach was utilized to facilitate the meetings, which meant the facilitator simply helped frame the meetings and asked questions of the instructors, but instructors dialogued with one another about issues and challenges in order to find practical solutions for addressing them. Meetings were strategically held at the beginning, mid-way point, and end of the semesters so that multiple opportunities were provided for mutual learning. The final check-in meeting was facilitated as a reflection session with more semi-structured questions related to new instructor challenges and the benefits and deficits of the TEAM program.

Participant Description

The program sample frame included 20 new instructors who utilized at least some portion of the TEAM program and attended at least 50% of program activities during their first year of teaching. The first year of the program included six new instructors, while years 2 and 3 included seven new instructors per year. In general, new instructors taught at least one course in each semester of their first year at the school and participated in the program during the fall and winter semesters. The demographic characteristics of participants were that 35% identified as male and 65% female, race/ethnicity demographics were not included due to low response rates for answering this question. Approximately 70% of TEAM participants had some prior teaching experience at another institution or program, often at an undergraduate level, while 30% of participants indicated no prior teaching experience. All instructors involved had no prior teaching experience at the institution that served as the setting for the TEAM program.

The demographics and characteristics of new instructors are considered typical based on the composition of new instructors in previous years. The categorization of TEAM participants by instructor level was identified as the most important characteristic for tracking purposes, due to the emphasis in the literature on the differing needs of adjuncts, graduate students, and junior faculty. Eight participants of TEAM were new adjunct faculty, eight were doctoral students, and four were new faculty members. While these groups could not be separated during the program, since the program was designed to provide support to all new instructors regardless of rank or category, during the final analysis, groups were separated by category to understand the unique needs and perspectives of each category of new instructors.

Program Approach and Evaluation Framework

Given the action-oriented nature of teaching and learning the authors utilized an action learning and research approach in the development and implementation of the mentorship program. The action learning approach has theoretical roots in the work and ideas of Brazilian educator Paulo

Freire (1970) and more recent work of adult education researcher Elizabeth Lange (2004), both view action learning as an emergent and evaluative process for dialogical learning and reflection involving adult learners in educational and community settings. Action learning emphasizes; dialogical learning in small groups, the use of a facilitator instead of a leader, engagement in praxis (critical reflection), and putting into practice knowledge gained from reflective learning (Lange 2004; Freire 1970). The principles of action learning emphasizes co-learning as a more effective method for adult learners than traditional educational approaches which emphasize leadership, the hierarchy between teachers and learners, and the notion that the teacher or leader has greater expertise than the students in the classroom or group (Freire, 1970). Furthermore, action learning was chosen as an approach for facilitating and evaluating the TEAM program as a means to aid support and mentorship among peers. Due to the inherent challenges of recruiting experienced instructors for teaching specific mentorship and the hierarchy that often exists in RI schools where tenured faculty are often considered more powerful than tenure-track or non-tenured instructors (Giroux, 2009).

For the purpose of evaluating the TEAM program participant experiences and identified needs was a major focus for the purpose of formative evaluation. As a result of the formative focus of this evaluation, qualitative methods were utilized in order to better understand the strengths and challenges of the program as well as the experiences of new instructors. Data were collected over the course of three years. Data were collected primarily through detailed notes taken from 18 meetings that were held with new instructors, three per semester. While the first two sessions each semester, one at the beginning of the term and one at the midway point of the term, were facilitated as loosely structured check-in meetings and were approximately 60-90 minutes in length, the final end of the semester meeting was framed as a reflection session. The reflection sessions were 2 hours in length and included more semi-structured questions posed by the facilitator for the purpose of better understanding how new instructors experienced teaching, the TEAM program, and the school as a whole during their first year. The utilization of dialogical conversations, along with more semi-structured conversations, provided a suitable and balanced data collection protocol that has precedence in the development of adult education programs (Stringer, 2014). Notes for these sessions were taken by the facilitator and by a graduate student volunteer. While names were not recorded, the instructor category of each member (new faculty, adjunct, doctoral student) was documented in order to better compare responses between groups.

Data Analysis

For the purpose of analyzing qualitative data collected during the formative evaluation of the TEAM program, the framework of Strauss and Corbin (1998) and Bazeley (2009) were consulted for guidance. Given the formative goals of TEAM, qualitative data were collected as a means to understand the strengths and challenges of the pilot program, as well as provide additional data about the overall needs of new instructors. Qualitative data collected through check-in meeting and reflection session notes were initially coded along 3 major categories: needs of new instructors, strengths of the program, and areas for improvement. The program facilitator and another university researcher conducted coding separately, and an initial agreement was reached on 90% of the codes. The facilitator and researcher discussed all codes where agreement was not reached until consensus toward sorting of data and labeling of codes could be attained. All final codes were verified with new instructors for accuracy, and changes

were made based on the consensus of feedback provided by new instructors. In this study, final codes were placed into two major categories related to the formative evaluation of the program: strengths and weaknesses. Codes were included if 50% or more of participants identified and/or agreed with the strength or weakness during the check-in and reflection sessions. Themes are represented as larger level challenges or needs experienced by new instructors, and are reported in table 3 of the subsequent results section of this paper.

Results

Table one below illustrates program strengths identified by new instructors who participated in the TEAM program:

Table 1. Mentorship Program Strengths Identified by New Instructors

Instructor Type	Program Strengths
Part-time professors (N=8)	**Peer Mentor (Facilitator) **Orientation **One-on-one consult Help connecting with other instructors Virtual resource site
Doctoral students (N=8)	**Peer Mentor (Facilitator) **One-on-one consult Help connecting with other instructors Orientation
New faculty (N=4)	**Go-to-Person (Facilitator) **Virtual resource site Help connecting with other instructors Orientation

** Denotes at least 75% agreement among new instructors within the category

Table one above indicates that the strengths of TEAM as identified by new instructors were similar across all categories of new instructors. By far the greatest asset of the TEAM program was having a go-to person for beginning mentorship needs, help, and direction. New instructors stated that it could be challenging to enter a new position and not know anyone or be faced with having to e-mail administrators or support staff over and over again. Through providing new instructors with someone who was knowledgeable with the university and school systems, who also taught at the school, new instructors felt less stressed and more welcomed into the school. Another asset of the TEAM program was orientation, which prior to TEAM had not formally existed at the school. Previously, new faculty/instructors to the school would meet with human resources and support staff about courses, and the administration would send them course outline exemplars or ‘master syllabi’ to aide them in creating their courses. The TEAM program created a new 6-hour orientation program for new instructors that covered a broad range of relevant topics and promoted community building among new instructors. While new part-time instructors found the orientation to be beneficial, doctoral students and new faculty found it less helpful. Doctoral students indicated that much of the information provided at orientation did not

apply to them, as they already knew much of the information from being students. New faculty members indicated that the orientation was too long and did not cover topics beyond teaching that applied to their position.

Another asset of TEAM was one-on-one consulting with new instructors. While TEAM provided a mentor to help new instructors navigate the university system and to answer questions, the consulting feature of the program was designed for those instructors wanting more direct help with teaching, curriculum development, activities, rubrics, and course management software. The consult feature of TEAM was most appreciated by new part-time instructors and doctoral students, while new professors chose not to utilize this resource as much, but agreed that it was a worthwhile feature for new instructors.

One of the major aims of TEAM was to facilitate mentoring relationships and community among new instructors, and also connect new instructors to other instructors in the school in order to build supportive relationships and networks for new instructors that would last after the TEAM program. While all new instructors mentioned having made some connections with instructors and staff at the school as a result of participating in the TEAM program, there was quite a bit of variance in the quality and productivity of the relationships made with faculty and staff.

Finally, one of the assets deemed beneficial to some new instructors was the help provided in setting up virtual course sites. While doctoral students stated that they did not utilize TEAM for technology support, given that they were already familiar with the platform from being students, new faculty members indicated this feature of the TEAM program as being very helpful, as it reduced frustration and ensured prompt accessibility to online systems upon hire.

Table 2. Mentorship Program Challenges Identified by New Instructors

Professor Type	Program Deficits
Part-time professors (N=8)	**Check-in meeting scheduling **No formal support beyond first year **Lack of faculty buy-in and support
Doctoral students (N=8)	**Lack of faculty buy-in and support **Not enough training on teaching Check-in meeting scheduling
New faculty (N=4)	**Orientation too long and poorly timed **Faculty have different pressures and needs beyond teaching **Check-in meeting timing at busy times Lack of faculty mentors

** Denotes at least 75% agreement among new instructors within the category

While the TEAM program experienced many successes over the three-year pilot program, new instructors also identified several deficits with the program. The deficits identified by new instructors were directly related to the components of the program that new instructors most utilized, which varied by category. For instance, check-in meetings were identified as problematic by all new instructors' due to the scheduling of meetings. This challenge was likely due to the very different schedules maintained by all three new instructor categories. While part-time instructors often worked a full-time job during the day, making it difficult to attend check-in

meetings held during the day, doctoral students and faculty preferred to hold check-in meetings during the normal working day, when they are already at the school.

Another major challenge identified by new instructors related to finding mentorship and support outside the TEAM program among other faculty and staff. While some new instructors easily made connections and had begun forging relationships with other instructors and faculty in the school, many found it difficult to make relationships with faculty and other instructors. Some new instructors stated that teaching did not seem to be of interest to others in the school, and most people were not knowledgeable about the TEAM program, so they did not understand the purpose and aims. Other deficits related to TEAM varied across categories of new instructors. New part-time instructors expressed a strong desire for TEAM to support instructors past their first year, while doctoral students felt like TEAM should provide more teaching workshops for students new to the profession. Finally, while new faculty members widely supported the TEAM program, they felt as though it was not geared towards new faculty members with positions that emphasized research and/or grant writing. Overall, the deficits identified by TEAM participants provide room for the program to improve and grow in the future.

Table 3. Institutional Barriers to Teaching Identified by New Instructors

Professor Type	Unmet Institutional Needs Identified by New Instructors
Part-time professors (N=8)	**More community in the school **Shift in culture towards teaching **Better work spaces with privacy Support from admin in student/grade conflicts Free parking Part-time instructor feedback in curriculum
Doctoral students (N=8)	**Optional teaching workshops and mini courses **Private meeting rooms **Better workspaces Help with designing rubrics Team teaching during first year
New faculty (N=4)	**Mentorship for faculty in teaching and research **Team teaching during first year More access to TAs Peer observations

** Denotes at least 75% agreement among new instructors within the category

The final themes outlined in table 3 above illustrate broader level challenges experienced by new instructors during their first year at the school. New part-time instructors stated that they did not feel very connected or received in the school, which left them wondering about the overall sense of community at the school. Additionally, new part-time instructors felt as though teaching was not valued at the same level as research focused activities. Finally, new part-time instructors found it difficult to work from the school or meet with students in privacy, because the spaces provided to them were not kept up with technology, offered limited work space, and offered no privacy for meeting with students about private or confidential information. Some new instructors also stated that they did not feel supported by the administration during

challenging situations with students over grades, ethics, and unverified accommodations. Finally, some new instructors found parking to be a major barrier for part-time instructors because of the cost and limited locations available to part-time instructors.

Similar to part-time instructors, doctoral students stated that workspace was an issue due to privacy concerns in relation to student meetings. Additionally, doctoral students wanted more training and capacity building focus by the school as it related to teaching. While most doctoral students received training and mentorship in research, very few doctoral students received courses, workshops, trainings, and resources specific to teaching pedagogy, methods, and curriculum design. Doctoral students also expressed a desire to team teach in their first year to help strengthen their capacity to teach in the classroom.

The major theme identified from data collected from new faculty participants of TEAM was the need and desire for ongoing mentorship and support in research and teaching. While new faculty who participated in TEAM appreciated the support in teaching, faculty expressed a desire to also have support in research, preferably from a tenured faculty member with similar research and teaching interests. Similar to doctoral students, faculty instructors felt like team teaching in the first year with a mentor would be beneficial to them as they learned the curriculum and culture of the school, while also reducing workload stress the first year. New faculty also stated that teaching assistants would be extremely helpful in the classroom during the first year.

Implications

Through the piloting of the TEAM program a great deal of insights about the mentorship and support needs of new instructors was acquired, which will be used to inform the structure and process of the program in the future. A part-time instructor supported by a proactive associate dean developed the TEAM program at a grassroots level. However, the program took very few resources to support over three years (less than \$6000). One of the biggest takeaways from TEAM is that doing almost anything to support new instructors and to highlight the importance of teaching and community can lead to positive gains. New instructors often remarked that other instructors they met and spoke with stated that before TEAM, new instructors just received a master syllabus and maybe an email to a professor who previously taught the course during their first-semester teaching. As a result of TEAM, new instructors felt increasingly supported by the school, part-time instructors were retained at higher rates, and fewer student conflicts with instructors rose to the level of administrative action (Brady, 2015). An additional implication taken from TEAM is how important mentorship is to new instructors. While some readers may critique whether or not TEAM fits their definition of mentorship, one of the main objectives of the TEAM program was to foster supportive relationships among new instructors, as well as to promote relationships with experienced faculty and instructors at the school. While the TEAM program struggled with connecting new instructors to experienced faculty for ongoing support after the first year, it did open dialogue amongst faculty and administration about the importance of mentorship and teaching at an RI institution. Despite teaching being considered equally alongside research at the school from a tenure and promotion perspective, many faculty prioritized research and grant writing over teaching. Additionally, given the rising percentage of courses taught by part-time instructors, it raises the question about how well RI institutions are supporting educators in the classroom. Additionally, by not supporting instructors in the classroom, do some RI institutions unknowingly cost students a high-quality education? Finally, in relation to doctoral students, given that almost all of them will at some point find themselves

in an employment position where teaching is a core responsibility, how well are institutions, especially outside the education/higher education field, preparing students for success in the classroom? Finally, while TEAM attempted to attain faculty buy-in and participation in the program in order to cultivate a culture of mentorship for teaching in the school, the program was not highly successful in doing so, which leaves the question: how do RI schools/institutions cultivate mentorship in relation to teaching?

Limitations

The TEAM pilot program demonstrated excellent beginning level results indicating that providing support and mentorship to new instructors was helpful and beneficial in the first year. While the beginning results of TEAM are promising, there were several limitations to the program and study. First, the sample size of 20 TEAM participants is small, and the results must be taken with caution. Additionally, while the evaluation for TEAM included all participants that utilized some portion of the program, instructors participated at various levels, making it difficult to ascertain what aspects of the program mattered most. Additionally, while all participants in the program participated in some check-in meetings and reflection sessions during their first year, not all new instructors attended all sessions, which could further bias perspectives about the program and overall experience at the school. Finally, the data shared in this paper does not illustrate whether or not the TEAM program improved the teaching of new instructors in the school through providing mentorship and support, but instead illustrates what aspects of the program were most beneficial to new instructors, how the program benefited them, and what additional needs and challenges were experienced by new instructors that the program may seek to address in the future.

Conclusion

While supporting the teaching of instructors, faculty members, and doctoral students seem like an intuitive part of the mission of institutions of higher education, the literature suggests otherwise, especially when it comes to supporting teaching at RI institutions. While most schools state that they value teaching, very few institutions and schools provide mentorship supports and resources to new instructors, especially part-time instructors, which is a major reason for creating TEAM. The TEAM program demonstrated that even the most basic semi-formal mentorship program could lead to positive gains among new instructors and be useful for identifying the needs of new instructors. While TEAM was considered a success by those involved, it also raised questions about the sustainability and buy-in of teaching specific mentorship programs among faculty, administration, and institutions. Finally, while TEAM did not seek to separate out adjuncts or doctoral students from new faculty members, the data indicated that there were some different mentorship needs among the various categories of new instructors, which must be closely considered before embarking on developing a mentorship program.

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Impact of Pre-service Teachers on P-5 Student Learning: Results of Unit Instructions

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Abstract: This quantitative study utilized 1,640 P-5 students' learning outcomes as a result of unit instructions that pre-service teachers gave to P-5 students in the field. The study investigated the difference in P-5 student learning outcomes after a unit instruction by three pre-service teaching practicum course tiers, considering socioeconomic statuses, student grade levels, and subject areas of the content taught by the pre-service teacher. Using normalized gain scores, we used a t test and regression analysis to analyze the data. Based on the findings, recommendations for pre-service teacher education include three items: a) to provide differentiated supervision based on pre-service teachers' experiences and needs, b) to require a proportionate and incremental assignment responding to the amount of pre-service teachers' experiences and hours in the classroom, and c) to incorporate co-teaching opportunities to facilitate peer learning and support in early field experiences.

Keywords: student learning outcomes, impact of pre-service teachers, practicum, unit assignments, assessments.

Introduction

The ultimate goal of teacher education programs is to prepare future teachers to impact student learning outcomes. In *What Makes a Teacher Effective*, the National Council for Accreditation of Teacher Education (NCATE, 2006) contends that well-prepared teachers outperform those who are not. They additionally proclaim that collaborative relationships between university programs and partner schools have positive impact on the K-12 students and further recommend that more research on teacher education be conducted. Nonetheless, attempting to find evidence in the research and prove the impact of pre-service teachers on student learning outcomes has been persistently problematic. This lack of evidence is mostly due to the fact that the majority of research on teacher preparation programs focuses on the process, rather than student outcomes (Boyd, Grossman, Lankford, & Wyckoff, 2009).

Although it is not an easy task, literature urges that teacher education programs systematically collect data to determine pre-service teachers' impact on students' achievement

(Clark, 2012; Wilson, Floden, & Ferrini-Mundy, 2001), which reflects the immediate purpose of our study. In order to systematically investigate pre-service teachers' impact on student learning, our study collected unit instruction assignments completed by P-5 pre-service teachers after they completed working in tiers, a sequence of field experiences. In addition to the immediate purpose, this study aimed to address the effectiveness of our program field experiences at different tiers for preparing pre-service teachers and how the field experiences impacted P-5 student learning. Specifically, the research addressed questions regarding: a) whether there are differences in P-5 student learning outcomes following a unit instruction by tiers of pre-service teachers, and b) whether there are differences in P-5 student learning outcomes following a unit instruction among practicum course tiers, considering socioeconomic statuses, student grade levels, and subject areas of the content taught by the pre-service teachers. We then discussed the results based on our program context and made recommendations for future practice and research.

Literature Review

Literature on pre-service teachers' impact on K-12 student learning outcomes is limited. Nonetheless, the call for attending to the impact of teacher education programs has been constantly conveyed throughout the years. According to Wilson et al. (2001), research on teacher education and the impact of teacher education programs began in the 1960s. Some federal funding supported the research in the 1970s and it gained momentum in the 1980s. Nonetheless, there has been very little sustained support for teacher preparation research.

In the report of the Teacher Preparation Research on current knowledge, gaps, and recommendations prepared for the U.S. Department of Education, Wilson et al. (2001) provided one recommendation specifically related to student achievement. They stated that research on teacher preparation should be explicit about research design and report to improve student outcomes. Although trying to measure the effects of teacher preparation is admittedly complicated, improving student achievement is always the ultimate goal. They therefore encourage the connection "from the design of studies to the interpretation and reporting of results" (p.34).

Regardless of the fact that it is difficult to gather student achievement data, some studies report findings in this area. Clark's (2012) investigating the impact of pre-service teachers on both mathematics achievement and attitudes of P-5 students at a Colorado School was one example. Her findings proposed that pre-service teachers can positively impact the achievement and attitudes of the P-5 students. Hedrick (1999) reported a study that involved pre-service teachers who tutored one-on-one with their students in 3rd, 4th, and 5th grade reading classrooms for a year. Utilizing portfolios that included daily running records, comprehension assessments, and writing samples collected by the tutors, the author analyzed the students' beginning and ending reading levels. The results of this study revealed significant advancement to the young students' reading levels. Furthermore, Stuart and Thurlow (2000) investigated 26 pre-service teachers' experiences, beliefs, and classroom practices. Part of their findings covering the impact of pre-service teachers' beliefs on P-5 students' mathematics achievement and attitudes suggested that pre-service teachers can positively impact the achievement and attitudes of P-5 students.

One noteworthy point in available literature is the dearth of details about how pre-service teachers impact their P-12 students' outcomes. In addition to the abovementioned literature,

other studies such as those of Broaddus (2000), Knowles (1992), and Smith and Strahan (1997) presented their writings in case studies as candidates reflected on their experiences with P-12 students. While working with the students in reading or math in the field, the pre-service teachers were provided opportunities to focus on the individuality of the learners. The prolonged engagement with students allowed pre-service teachers to move beyond the focus on their own processes, materials, and strategies, and to begin making instructional decisions based on the student outcomes. Consequently, although the focus of the studies was on the pre-service teachers' progress, outcomes indicated that the pre-service teachers became more aware of the level of questioning and expectations of their young students. This awareness led them to adjust their questioning and expectation levels and help students achieve at a higher level. The pre-service teachers' reflections in these case studies demonstrated that the P-12 students benefit from pre-service teachers' knowledge of the individual child and higher level of instruction. How pre-service teachers' impact on P-12 student learning in the literature; therefore, derives mainly from pre-service teachers' reflection on their field experiences.

The Oregon teacher licensure system serves as a model that emphasizes student learning outcomes and not the knowledge and skills of the teachers. For example, prospective teachers in the system are required to provide evidence of their impact on all their students' learning during two separate units of instruction (Schalock, Schalock, & Myton, 1998). The focus becomes centering on student learning and encourages candidates to assess student learning and using the assessment outcomes to foster the students' learning progress. As a result, teaching practices in this system change and gains are shown in students' learning.

Further supporting this idea is Darling-Hammond (2003), who in *The effects of initial teacher education on teacher quality* suggested four factors that contribute to teachers' influence on student achievement: a) Emphasizing the importance of focusing pre-service training on the P-12 student outcomes, b) the factors include content area training, c) diversity training in pre-service and d) professional development, thinking skills training, and hands-on training.

Recognizing the importance of pre-service teacher education, U.S. Secretary of Education Arne Duncan (2009) also advocated a trend of moving the focus from what and how pre-service teachers do, to how and what they can do to impact student learning. In a speech addressing to the Teachers College of Columbia University, Duncan explicitly upheld that "America's great educational challenges require that this new generation of well-prepared teachers significantly boost student learning and increase college-readiness."

Method

This quantitative study utilized authentic student learning outcomes as a result of unit instructions that pre-service teachers gave to P-5 students in the field. The study lasted a semester and posed little research effect on P-5 students and pre-service teachers, as the data were required assignments of pre-service teachers' courses that focused on field experiences in the program. The advantage of using authentic data was that it allowed the researchers to assess the unaffected impact that pre-service teachers had on P-5 students' learning.

Settings

The settings of this study are a P-5 teacher education program at a university in the southeast region in the U.S. and 15 P-5 schools where we place pre-service teachers in classrooms and are

within a 60-mile radius of the campus. Among the schools, one serves a population that included 0-19% of the students with an economically disadvantaged status, two have 20% - 47%, five 48% - 64%, and seven 65% and more of the students at an economically disadvantaged status.

In early childhood teacher education, pre-service teachers are in junior or senior years and enroll in the three successive practicum course tiers, Methods I, Methods II, and Student Teaching. They are placed in classrooms working with university supervisors and cooperative teachers based on the requirement of diverse placement. Each classroom they are placed in has around 15 to 30 students.

Pre-service teachers in each practicum course tier are placed based on their experiences and work with different grade levels for varied hours in the field. Methods I students are placed in K-2 classrooms in groups of three or pairs working with P-5 students in the morning for four hours on Tuesday and Thursday in the first 10 weeks of the semester, and thereafter four hours every morning in the last five weeks of the semester. Altogether, they work in the classroom for 180 hours. In Methods II, pre-service teachers work in grade-3-5 classrooms in pairs full day for 10 weeks, altogether 400 hours in this experience. Student Teaching is the last stage of practicum in the program and pre-service teachers work with P-5 students all day, with a total of 600 hours in the classroom individually for the entire semester.

The program maps out differentiated supervision and assignments proportionate to each practicum tier based on pre-service teachers' experiences in the field. Pre-service teachers in Methods I are required to design a culminating 3-day unit on language arts or social studies, get approved by the university supervisor and cooperating teacher, and teach it to the students. Before planning the unit, they conduct a content research on which they base to plan a pre-assessment, evaluate student ability on the topic, and use the pre-assessment results to adjust the curriculum and plan a unit. After the instruction, P-5 students take the post-assessment the same as the pre-assessment. A culminating 5-day unit for pre-service teachers in Methods II covers science or math. Pre-service teachers in Methods II conduct a pre- and post-assessment following similar procedures as those in Methods I tier. Pre-service teachers in Student Teaching plan, teach, and evaluate a 10-day unit on a subject suggested by cooperating teachers. They follow similar procedures regarding the unit planning, teaching, and assessing using the same pre- and post-assessments as those in the Methods I and Methods II course tiers. More details of the field experiences in each practicum level are provided in Table 1.

Table 1. Practicum Tiers and Field Experience Descriptions

Characteristic	Methods I	Methods II	Student Teaching
Entering the field	Second semester, Junior	First semester, Senior	Second semester, Senior
Courses taken alongside Practicum	Language and Literacy, Creative Arts, & Social Studies	Math, Science, & PE	Seminars (support of portfolio development)
Levels of supervision	Four 3-hr orientations whole group; Full attention from US; Limited attention from CS	Two 3-hr orientations whole group; two 3-hr orientations with US; Equal attention from US and CS	One orientation before semester on portfolio and licensure process; Primary attention from CS

Types of placement	2-3 PT in the same classroom	2 PT in the same classroom	1 PT in the classroom
Grade levels	K-2	3-5	K-5
Teaching subjects	All	All	All
Unit Length	3-day	5-day	10-day
Unit Subjects	*Language Arts or Social Studies (*preferred)	*Math,* Science, Social Studies, or Language Arts (*preferred)	Any one of the four subject areas
Hours in the classroom	180 hours	400 hours	600 hours

PT=Pre-service Teacher(s)

Samples

We included 1,640 effective P-5 samples in this study. These P-5 students were selected because they were taught by 71 pre-service teachers who responded to our request submitting useable P-5 students' pre- and post- assessment results. Unfortunately, data from three pre-service teachers were discarded as they were not decodable or quantified, with 68 pre-service teachers' student learning data usable. Effective 68 responding pre-service teachers were among a total of 211 who enrolled in the program and were recruited, with a response rate of 32.2%.

Among the 1,640 effective P-5 samples (see Table 2), 507 P-5 students came from Methods I classrooms, 646 from Methods II classrooms, and 487 from Student Teaching classrooms. Of all P-5 students, 229 were kindergarteners, 295 first graders, 121 second graders, 539 third graders, 91 fourth graders, and 365 fifth graders. Among subjects taught, 792 P-5 students were taught in language arts, 80 in health, 104 in math, 321 in social studies, and 343 in science. P-5 students' race and gender were not clear because they were identified in the assignment as numbers to protect their confidentiality. Of all the P-5 students, 68 were in schools with 0% to 19% of the students at an economic disadvantage, 286 were in schools with 20% to 47% of the students at an economic disadvantage, 440 in schools with 48% to 64% of the students at an economic disadvantage, and 846 in schools with 65% and more of the students at an economic disadvantage, which reflected the SES facts of the regions that the program works with.

Table 2. P-5 Students' Demographic Information

Category						
Classrooms	MI	MII	ST			
	507	646	487			
Grade Level	K	1	2	3	4	5
	229	295	121	539	91	365
Subject	Language Arts	Health	Math	Social Studies	Science	
	792	80	104	321	343	
SES	0%-19%	20%-47%	48%-64%	65% and above		
	68	286	440	846		

Data Sources and Collection

Pre- and post- assessments designed and administered for unit instructions by the three practicum course tiers were the sources of data that evidenced P-5 student learning outcomes for this study. The unit is a critical and culminating assignment that the pre-service teacher designs and teaches in his/her specific field experience required by the program. The unit assignments for the three practicum course tiers are established as a program and each unit assignment adapts to the pre-service teachers' stage of learning. The unit design is informed by pre-assessment results, deliberated based on the developmental stages of the P-5 students in the class, and supervised and monitored by the university supervisor and the cooperating teacher. As a result, each unit can be as unique as the instructed group of students. After completion of the unit instruction, the pre-service teacher is required to analyze the outcomes of the pre- and post- assessments organized in tables, charts or bars. The outcomes of the assignments indicate the pre-service teachers' teaching and learning toward becoming teachers and were what we utilized in this study.

The data collection took several steps to complete. We firstly gained the program consent to conduct this study. After obtaining instructors' support through program meetings, we explained the study to the pre-service teachers and invited them to sign the informed consent if they agreed to participate. Finally, at the end of the semester, the researchers collected the analyzed results of the unit assessments electronically from the pre-service teachers.

Validity

The designs and implementations of pre-assessments, units and post assessments were closely monitored through experienced specialists, i.e., university supervisors and cooperating teachers to ensure the validity of the study. In the program, all unit designs are proportionally supervised by university supervisors and cooperating teachers based on the teaching experiences that pre-service teachers have in the field. Specifically, Methods I pre-service teachers, who have the least teaching experience, received the most intensive clinical supervision from university supervisors primarily and supported by cooperating teachers in the content. After obtaining a topic for the unit, each Methods I pre-service teacher conducts a content research, communicates with their cooperating teacher, and warrant an appropriate content for the unit. Approved by both the cooperating teacher and the university supervisor, pre-service teachers administer a pre-assessment to their students and use the results to further inform the unit design. Once finishing instructing the unit, the pre-service teacher administers the post assessment the same one as the pre-assessment. Methods II pre-service teachers followed the same procedures as those in Methods I and received similar support from both the university supervisor and the cooperating teacher, yet with a less degree of intensity due to the experience that they had obtained in Methods I. After the two former course tiers, pre-service teachers in Student Teaching generally demonstrate a higher level of competency in planning. As a corollary, pre-service teachers in this tier rely mostly on cooperating teachers' guidance and consultation for their unit design. The role of university supervisors then turns primarily to the oversight of the design of teaching strategies and management plans, and ensure that all aspects of the unit design reflect the program's expectations.

There was a concern that the achievement data were derived from pre-service-teacher-made tests with varying difficulty levels. It is not possible to provide a complete review of all

pre-service teachers' tests since the study contained more than 1,000 such tests in various subject areas, grade levels and in varying school populations. In order to make the data more comparable across the variety of conditions included in this study, we employed normalized gain scores before analysis (Bao, 2006).

Data Analysis

Although all pre-service teachers follow the same guidelines of the unit assignments provided by the program, the student achievement data for this study were difficult to interpret and compare. It was because the data were derived from many pre-service teachers who provided instruction across a variety of content areas and grade levels. Moreover, the achievement data were from pre-service-teacher-made tests with varying difficulty levels. To make the data more comparable across the variety of conditions included in this study, we employed normalized gain scores before analysis (Bao, 2006).

Gain and Change Scores

Normalized gain, symbolized by g , represents the proportion improvement of what could be improved from pre-assessment to post-assessment. For example, suppose a student scores 40 out of 100 correct on a pre-assessment. The amount of improvement possible from the pre-assessment score is $100 - 40 = 60$. Suppose further that this student scores 70 on the post-assessment. The increase from pre-assessment to post-assessment is 30 points, and this 30 points represents a 50% increase over the pre-assessment score in terms of what could be gained, i.e., gain of 30 divided by the possible gain of 60 is $30/60 = .50$ or 50%. Similarly, a student who obtains a pre-assessment score of 90 has only 10 points of possible improvement on the post-assessment to obtain a maximum score of 100. If this student scores 93 on the post-assessment, that represents a 30% increase over what could have been gained, i.e., a 3 point increase from post-assessment to pre-assessment ($93 - 90 = 3$) which is divided by the maximum possible gain of 10 points (maximum score minus pre-assessment score is $100 - 90 = 10$). Thus, this second student has a normalized gain score of $3 / 10 = .30$ or 30%.

The formula for normalized gain is provided by Bao (2006):

$$g = \frac{\text{Post-assessment Score} - \text{Pre-assessment Score}}{\text{Maximum Score} - \text{Pre-assessment Score}}$$

For this study we calculated normalized gains from percentage scores, so the formula presented by Coletta and Phillips (2005) was used:

$$g = \frac{\text{Post-assessment \%} - \text{Pre-assessment \%}}{100\% - \text{Pre-assessment \%}}$$

where post-assessment % was percentage correct on the post-assessment and pre-assessment % was the percentage correct on the pre-assessment.

By using the normalized gain score the focus shifts from absolute test scores to relative gains, so the focus of this study was not on absolute gains which may differ greatly across the variety of pre-service teacher-made tests employed, but instead on the relative gain each pre-service teacher was able to foster from their students.

One problem with normalized gain occurs when a post-assessment score is lower than the corresponding pre-assessment score (i.e., post-assessment < pre-assessment). In this situation the interpretation of normalized gain fails and the calculated values no longer represent the portion

gain or change relative to what could be gained. When post-assessment < pre-assessment, Marx and Cummings (2007) proposed the following formula:

$$g = \frac{\text{Post-assessment \%} - \text{Pre-assessment \%}}{\text{Pre-assessment \%}}$$

This formula provides a change score that presents the proportion loss from the pre-assessment starting position. This interpretation is more consistent with normalized gain, although the focus with this formula is loss from where one started. For situations in which pre-assessment scores were greater than post-assessment scores in this study, we calculated and converted the normalized change score to a percentage loss.

Another problem occurs when a pre-assessment score and a post-assessment score are both 100%. In this situation, the student has reached the utmost score for both tests. Therefore, the normalized gain would be 100 for this student.

Analysis Approaches

After P-5 students' performances were converted to normalized gain scores, we used two analysis approaches to find answers to the inquiry questions: a *t* test to examine differences in the normalized gain scores and a set of regression tests to investigate the differences in the student learning outcomes among practicum tiers, subject areas, social economical statuses, and grade levels.

The data for this study formed a natural clustering of K-5 students grouped by pre-service teachers. Taking into account the clustering of observations, we used a linear mixed model (Fitzmaurice, Laird, & Ware, 2011), also known as a multilevel model (Snijders & Bosker, 2012) or hierarchal linear model (Raudenbush & Bryk, 2002), to regress normalized gain scores on the four predictors examined. This model avoids standard errors and hypothesis tests that will be incorrect and lead to Type 1 errors -- indicating there are differences when there are not.

Mixed Model of Student Learning Outcomes

We used the following random intercept model (Rabe-Hesketh & Skrondal, 2005) for normalized gain scores in a linear mixed model:

$$(\text{Normalized Gain})_{ij} = \gamma_{00} + \sum \alpha(\text{Course})_{ij} + \sum \beta(\text{Economic Status})_{ij} + \sum \chi(\text{Grade Level})_{ij} + \sum \delta(\text{Subject Area})_{ij} + e_{ij} + \pi_{0j}$$

In summary, we can understand the components of this model as follows:

γ_{00} is the mean normalized gain controlling for the four predictors;

$\sum \alpha(\text{Course})_{ij}$ are dummy variables for pre-service teachers' course of study (i.e., Methods I, Methods II, or Student Teaching);

$\sum \beta(\text{Economic Status})_{ij}$ are dummy variables for the economic status of the school in which students are enrolled (i.e., percentage of students on free or reduced lunch);

$\sum \chi(\text{Grade Level})_{ij}$ are dummy variables represent student grade level (i.e., K through 5th);

$\sum \delta(\text{Subject Area})_{ij}$ are dummy variables for content subject area (e.g., Mathematics, Science, etc.);

e_{ij} is the student level error term, and

π_{0j} is modeled effect of pre-service teacher *j* on normalized gain controlling for the other modeled predictors.

Results

Inquiry Question #1

Are there differences in P-5 student learning outcomes after a unit instruction by pre-service teachers? The analysis of student performance was conducted in order to learn whether the gain demonstrated by P-5 students was greater than would be expected by chance. To assess gain, we performed a one-sample *t*-test. Results showed that the mean normalized gain score was $M = 65.06\%$ ($sd = 38.79$, $n = 1640$), and this level of gain was statistically significant at the .05 level ($t = 67.93$, $df = 1639$, $p < .05$, 95% CI = 63.19, 66.94). This finding indicates a statistically significant difference in P-5 student learning outcomes following a unit instruction by pre-service teachers and suggests that P-5 students significantly benefiting from pre-service teacher unit instruction and demonstrating improvement over their pre-assessment scores.

Inquiry Question #2

Are there differences in P-5 student learning outcomes after a unit instruction among practicum course tiers, considering socioeconomic statuses, student grade levels, and subject areas of the content taught by the pre-service teachers? We addressed this question by the regression models as follows.

Sources of gain

This set of analyses focused on determining whether student achievement normalized gains differed by practicum course tier (Methods I, Methods II, and Student Teaching), socioeconomic status (0-19%, 20% to 47%, 48% to 64%, and 65% and above economically disadvantaged), student grade level (kindergarten, 1, 2, 3, and 4 + 5), and subject area of the content taught by the pre-service teacher (Social Studies, Language Arts, Science, and Mathematics and Health). We presented mean normalized gain scores for each of these four factors in Table 3.

Table 3. Descriptive for Student Normalized Gains by Pre-service Course Tier, School Economic Status, Student Grade Level, and Subject Area (N=1640)

Variable	Mean Normalized Gain	SD	n
Course Tier			
Methods I	68.16	45.57	507
Methods II	62.29	37.47	646
Student Teaching	65.52	32.06	487
Socioeconomic Status			
0 to 19%	83.87	28.05	68
20 to 47%	64.14	43.70	286
48 to 64%	67.87	34.97	440
65% or more	62.40	39.20	846
Grade Level			
Kindergarten	63.30	43.29	229
Grade 1	75.14	39.04	295
Grade 2	60.46	48.76	121

Grade 3	68.32	36.33	539
Grade 4	69.53	25.63	91
Grade 5	53.63	35.07	365
Subject Area			
Language Arts	65.22	42.36	792
Health	57.70	28.74	80
Mathematics	68.40	30.95	104
Science	68.40	33.47	321
Social Studies	62.30	38.71	343

Mixed Regression Model

We obtained model estimates using maximum likelihood (StataCorp., 2011) and Table 4 contains regression estimates.

Table 4. Mixed Regression Model of Normalized Gain (N=1640)

Fixed Portion of Model	B	se b	95% CI		LR χ^2	df	p-value
Course Tier					2.24	2	0.33
Methods II	-9.83	12.22	-33.78	14.13			
Student Teaching	5.15	10.82	-16.06	26.35			
Socioeconomic Status					5.66	3	0.13
20 to 47%	-36.31*	17.27	-70.15	-2.47			
48 to 64%	-24.31	17.25	-58.11	9.50			
65% or more	-24.25	15.49	-54.61	6.12			
Grade Level					8.85	5	0.12
Grade 1	11.49	7.61	-3.44	26.41			
Grade 2	-7.88	9.25	-26.00	10.25			
Grade 3	9.02	12.09	-14.69	32.72			
Grade 4	6.74	17.05	-26.67	40.14			
Grade 5	-11.19	12.79	-36.27	13.89			
Subject Area					1.76	4	0.78
Health	8.60	16.08	-22.92	40.12			
Mathematics	-7.24	12.66	-32.05	17.58			
Science	-9.19	8.27	-25.40	7.03			
Social Studies	-6.32	7.79	-21.58	8.95			
Model Intercept	94.30	16.92	61.12	127.47			
Random Portion of Model	Estimate	se					
Student-level SD	18.33	1.85					
Pre-service Teacher SD	33.30	0.59					
R^2 (total variance modeled)	0.055						

Note. Each coefficient estimated represents a dummy variable coded 1 if the student belonged to that particular classification or coded 0 if student was not a member of that classification. For example, Grade 1 dummy variable was coded 1 if student was in Grade 1, or coded 0 otherwise. The reference, or comparison, group for each dummy set was Methods I for Course Tier, 0 to 19% for Socioeconomic Status, Kindergarten for Grade Level, and Language Arts for Subject Area. LR χ^2 represents the Likelihood Ratio test chi-square result for variable contribution to the model. n = 1640 students taught by 68 pre-service teachers.

* p < .05.

As shown by the model Likelihood Ratio (LR) tests (Snijders & Bosker, 2012), there are no statistically significant differences in normalized gain scores based upon practicum tier (Likelihood ratio chi-square = 2.24, $df = 2$, $p = .33$) after controlling for the other predictors (school economic status, grade level, and subject area). This result suggests P-5 students perform equally well for Methods I, Methods II, and Student Teaching, which is what the program has planned for.

Finally, we attempted several models of interactions for the regression analyses, but none worked because there were not enough students in the various variable category combinations and for several combinations the sample size was 0. For example, in the model testing for the interaction between Socioeconomic Status and Course Tier, there were eight coefficients to be estimated for the interaction results, but the model was only able to provide estimates for three of the eight coefficients. The others were reported as "0 (empty)" and this means they could not be estimated due to no information or small cell sizes. Further discussion follows in next section.

Discussion and Conclusion

The findings indicate that there is a significant difference in P-5 student learning outcomes after a unit instruction by the pre-service teachers. On the other hand, the findings reveal that there is no difference in P-5 student learning outcomes after a unit instruction among practicum course tiers, controlling for socioeconomic statuses, student grade levels, or subject areas of the unit content taught by the pre-service teacher. The results infer that the P-5 students significantly benefited and performed equally well in learning the unit taught by the pre-service teachers in the three practicum tiers.

Based on the results, a question arises: How could this be possibly true with the pre-service teachers coming with varied levels of experiences? This question is especially comprehensible with the conflict found in the literature reporting that the more experienced pre-service teachers are in the field, the more effective they are in helping students learn (Boyd et al., 2009; Darling-Hammond, 2003b; Wilson et al., 2001). The answer to the question may not be judicious unless otherwise justified through and grounded in the program context, about which we would like to articulate further.

First, the results indicate no significant difference in P-5 student learning outcomes following the unit instruction among practicum tiers. The justification of this phenomenon may be the discriminated clinical supervision underwritten by the program and the unit assignments proportionate to each practicum tier. The mass and intensity of supervision provided to pre-service teachers in each tier of the practicum are based on where their experiences are and what they need. Therefore, the least experienced group of students in Methods I receive the most support from university supervisors in the planning and implementation of the unit, less in Methods II, and the least in Student Teaching. Additionally, the length and weight of the unit assignments required in each tier vary in accordance to the pre-service teachers' ability and time capacity. Method I students are required to plan and implement a 3-lesson unit working altogether 180 hours during the semester at a lower grade level, while Method II a 5-lesson unit working 400 hours at an upper grade level and Student Teaching a 10-lesson unit working 600 hours at any P-5 grade level assigned. The varied assignments based on experiences and hours in the classroom may reflect a sensible consideration of the program concerning pre-service teachers' ability and capacity in working with P-5 students. Collectively, the differentiated supervisory supports and proportionate assignments may be critical in empowering pre-service

teachers in the way that it helps generate success and promote confidence in the classroom. Furthermore, co-teaching opportunities may be helpful for pre-service teachers with less experience. Methods I pre-service teachers are placed in three or pairs in the classroom, Methods II in pairs, and Student Teaching individually. This placement strategy could potentially be a factor beneficial to the achievement at these first two tiers. As suggested by Graziano and Navarrete (2012), addressing the diverse needs in a classroom through co-teaching contributes to increased student achievement, which may provide an explanation to this result.

Second, the results indicate no statistically significant differences in P-5 student learning outcomes among the three practicum course tiers based on students' socioeconomic backgrounds and grade levels, as well as the subjects. The justification of this phenomenon again points to the collaborative practice of clinical supervision with which university supervisors and cooperating teachers support and build pre-service teachers up in planning and implementing the unit. Pre-service teachers work diligently with university supervisors, design and implement a unit on language arts and social studies in Methods I while cooperating teachers ensure that the content is right. Pre-service teachers in Methods II work with university supervisor and cooperating teachers collaboratively. Throughout Student Teaching, cooperating teachers supervise pre-service teachers' planning and teaching of a unit on an assigned subject. Close and vigilant supervision from both mentors may have promoted pre-service teachers at varied tiers so that they could effectively engage students during their unit instruction. Therefore, the effectiveness of pre-service teachers at varied tiers may have contributed to the findings that no significant differences were found in P-5 student learning outcomes following a unit instruction among practicum course tiers regarding student SES statuses, grade levels and subject areas of the content taught by the pre-service teachers.

Limitations of the Study

One limitation of this study was that we were not able to analyze the interactions among variables because empty values existed via the linear mixed model. However, it is an inevitable matter due to the settings structured in the program. The program organizes tiered field experiences the way that Methods I pre-service teachers are placed in K-2 classrooms, Methods II in 3-5 classrooms, and Student Teaching in K-5 classrooms. Additionally, the requirement of diverse placement urges pre-service teachers to work in diverse socioeconomic status settings. Consequently, there are intrinsically empty values in the variables of Economic Status and Course Tier among the three practicum tiers per the program design.

Another limitation was that some collected data were not usable and discarded because the data were not presented in a format that could be decoded or quantified. Given that the program provides instruction for analysis of the assessment results, unfortunately, the assignments of three pre-service teachers were not measured the way that could be properly calculated, with approximately 70 P-5 students' learning outcomes in language arts and math respectively excluded. With this limitation, we recommend that teacher education programs devote efforts to teaching pre-service teachers how to quantify and use the assessment results to their instruction. It is not easy yet critical for pre-service teachers to appropriately quantify, analyze and interpret assessment results they obtain from instruction, a skill that will help pre-service teachers present, interpret, and use assessment data to inform their instruction in the future when they have their own classrooms; and an essential skill to have in the era of accountability (Brimjoin, Marquissee, & Tomlinson, 2012; Darling-Hammond, 2003).

Additionally, our pre-service teachers are still getting to know their young learners and are developing their skills on assessing diverse learners; and they are challenged as they create equitable assessments (assessments which are most appropriate for the diverse learners in the classroom, such as their language ability and culture) and provide appropriate feedback and adaptations of their instruction (Siegel, 2014). We concur with recommendations in recent studies that courses or seminars focusing specifically on assessment of student learning would enhance our students' ability to assess student learning, build upon the assessment skills necessary for their future classrooms, and contribute to a more positive attitude toward assessment, which helps optimize their efficacy for administering and analyzing appropriate assessments with their students (Darling-Hammond, 2003; McGee & Colby, 2014; Siegel, 2014).

Recommendations for Future Practice and Research

Based on the findings, the context of our study serves as critical learning components for pre-service teachers and allows their instructions to impact P-5 student learning. Therefore, recommendations for pre-service teacher education include three items: a) to provide differentiated supervision based on pre-service teachers' experiences and needs, b) to require a proportionate and incremental assignment responsive to the amount of pre-service teachers' experience and hours in the classroom, and c) to incorporate co-teaching opportunities to facilitate peer learning and support in early field experiences.

With the dearth of the literature on pre-service teachers' impact on K-12 student learning, our recommendations for future directions of research resonate with what Clark (2012) suggests. First, the impact on the P-5 students in the schools should not be ignored while field experiences are being studied. Second, more data concerning pre-service teachers' impact on student learning during their practicum experiences should be systematically collected. Another recommendation for future research is that if a study is conducted by arrangement, gender should be considered as one variable to examine the outcomes.

Conclusion

In conclusion, this study has fulfilled multiple purposes. First, locally, it informs our program and college of pre-service teachers' impact on student learning. As a result, our program will be able to evaluate, adjust, and restructure the practices and assignments to better help the learning of pre-service teachers based on the findings. Second, it extends the knowledge of pre-service teachers' impact on P-5 student learning to the larger professional communities in the world.

The study contributes to the literature in the fact that it provides the details of the context and utilizes data from P-5 students' achievements and it also attends to all subject areas, social economic statuses, and grade levels of P-5 students, which extends the efforts of former researchers in this area (Boyd et al., 2009; Clark, 2012; Stuart & Thurlow, 2000; Wilson et al., 2001). The emphasis on student outcomes in this study enhances the results of recent studies (Clark, 2015; McGee & Colby, 2014; Siegel & Wissehr, 2011; Simon, Chitpin, & Yahya, 2010) on pre-service teachers' process of, attitudes toward, and development of assessment skills/literacy by demonstrating that higher efficacy and more positive attitudes toward assessment can positively impact the P-5 learners' achievement. Finally, the study provides the potential to benefit others who are interested in the same topic for future practice and research.

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Content Area Pre-service Candidates Learning Language Teaching with Adolescent Immigrants in an Urban PDS Middle School

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Abstract: How do teacher candidates develop their knowledge in second language literacy to support their students in a Professional Development School (PDS)? This article reports preliminary findings of a qualitative study that investigates the learning process of single-subject credential candidates in a pilot urban PDS site where they co-taught and co-learned in an English Language Development (ELD) program through an on-site seminar credential class. Data collection included, but was not limited to, researcher observational fieldnotes, candidate reflections, term papers, and transcripts of interviews and performances. The study finds that in an interactive, social learning space created by the PDS setting, teacher candidates challenged their assumptions about learning English among immigrant students, as well as identified language learning opportunities in traditional worksheet-based activities and a communicative project.

Keywords: teacher education, second language literacy, English language learners, professional development schools.

Dear Fanglin¹,

I loved the puppet show you and your class performed and had fun helping you prepare for it. It made me very proud to watch you on stage. You pronounced all the words perfectly and paused after every exclamation point. You even put emotion into the words, and all of that while so many people were watching! My time at Bayside is almost over and I will be teaching my own class very soon. I will always remember you greeting me every Wednesday with a big smile and a warm hello. Thank you Fanglin, good luck in your studies! Best wishes, Ms. Kristen (Teacher Candidate, note to Fanglin, her student partner, at the end of the semester)

Fanglin is a recent immigrant student in an American public school, as the student population has been undergoing steady demographic changes in the country over the past decades. With an increasing enrollment rate from ninety to ninety-three percent between 1980 and 2009, the number of school-age children who spoke a language other than English at home rose from 4.7 to 11.2 million, or from ten to twenty-one percent of the population in this age range (U. S. Department of Education, 2012). Language diversity has become the new norm in everyday school life. In California, for example, the percentage of public school students participating in programs for English language learners (ELs) rose from twenty-six percent to twenty-nine percent between 2002 and 2011 (U. S. Department of Education, 2013). There were about 1.4 million ELs in public schools in 2011-2012 (California Department of Education, 2013). Since the No Child Left Behind Act of 2001, accountability and standardized testing have become pressing

¹ All names are pseudonyms.

buzzwords for educational policies in the United States. This in turn has increased the number of ELs in mainstream classrooms without making good use of their L1 resources and without preparing teachers accordingly (Lucas & Villegas, 2013). Despite the demographic changes, research shows that mainstream teachers are not sufficiently prepared for ELs (Waxman & Tellez, 2002; Rubinstein-Avila & Lee, 2014), especially those in secondary schools who struggle between low academic achievement and high dropout rates (Major, 2006). School teachers, like Kristen, urgently need the experience and pedagogical, linguistic knowledge to address the challenges of students like Fanglin.

Educational researchers have put forth several theoretical frameworks to guide teacher preparation programs in the new era of linguistic diversity. For instance, Fillmore and Snow (2002) lays out what classroom teachers need to know about language, from oral to written, and from socialization to academic language. Lucas, Villegas, and Freedson-Gonzalez (2008) describes linguistically responsive pedagogical practices to promote candidates' awareness and understanding of teaching language and content at the same time. Turkan, de Oliveira, Lee, and Phelps (2014) proposes a disciplinary linguistic knowledge base for teachers to understand and model the academic discourse of their content areas in order to further engage ELs. To operationalize these principles, the researchers argue for well-designed university courses on the linguistic, sociolinguistic, and sociocultural aspects of language learning and teaching (Fillmore & Snow, 2002), well-grounded assessment of linguistic knowledge of content areas (Turkan et al., 2014), and field opportunities for candidates to spend time and complete required coursework with ELs (Lucas, Villegas, & Freedson-Gonzalez, 2008).

In practice, scaffolding and differentiation based on clear understanding of language demands and goals are among the many effective pedagogical strategies for ELs. They are widely discussed in teacher preparation programs and assessed (e.g., in the Performance Assessment for California Teachers that has been adopted by teacher preparation programs nationwide).² The strategies refer to careful instructional steps to make content accessible and to modify learning tasks according to the strengths and needs of ELs at various stages of mastery of English (see Rothenberg & Fisher, 2007). However, research shows that some secondary teachers feel ill-prepared in this regard (e.g., Rubinstein-Avila & Lee, 2014) because of "limited preparation for teaching content to ELs" (p. 189). When observing closely in the classroom, researchers find that such frequently-visited topics as differentiation, grouping, and scaffolding in methods courses are not being translated smoothly into effective classroom teaching (Coady, Harper & De Jong, 2015). The perilous gap between university courses and classroom teaching is evident, as the researchers argue.

To fill the gap between theory and practice, researchers study programs that attempt to contextualize teacher preparation in a sociocultural process of language learning in EL communities (Coady, Harper, & De Jong, 2015; García, Arias, Murri & Serna, 2010). For instance, small-scale research projects in credential courses assign case studies of ELs and their communities to push candidates' understanding of their challenges and resources. Jurchan and Morano (2010) documents a case study project in which teacher candidates collected extensive qualitative data from their one-on-one tutoring experience with K-12 ELs, as well as data from the institutional definition of ELs via test scores, policies, and resources. The purpose is to raise candidates' awareness of the sociopolitical impact on learning, the crucial role classroom teachers play in EL's development, and the nature of language learning. Besides course-based research projects, candidates are introduced to service-learning activities to develop empathy and

² See <https://scale.stanford.edu/teaching/pact>

pedagogical skills to work with ELs (e.g., Fan, 2013; Hadjioannou & Hutchinson, 2010). In a graduate social studies methods course, twelve teachers designed and conducted a serve-learning, interdisciplinary project to encourage their elementary school students to become critical thinkers and activists for social change (Ponder, Veldt, & Lewis-Ferrell, 2011). Dove and Honigsfeld (2010) describes seven co-teaching models in a K-12 setting that involve collaborations among in-service teachers in various departments – ELD, general education, and subject areas. The collaborations encourage positive dispositions and strong leadership among teachers in supporting ELs.

Still, researchers and teacher educators have yet to investigate what it looks like for pre-service content area teachers to understand language learning and teaching in a community of ELs. Many existing studies either are limited by the scope and time of a university course isolated from ELs or involve only elementary school teacher candidates. More research on secondary school candidates' learning *with* (rather than about) ELs and about effective teaching (and learning) strategies *for* ELs is needed.

PDS as Social Learning Spaces for Language Learners and Teachers

Professional development schools (PDSs), first proposed by the Holmes Group in 1986, offer both a practical platform for meaningful field experiences and a reflective tool with which teacher candidates integrate first-hand knowledge about students into teaching, and theory into practice, under the tutelage of schoolteachers and university instructors (Gebhard, 1998). The PDS is a descendant of the laboratory schools of the early 20th century. Guided by an inquiry approach, candidates learn to plan, teach, and work alongside more experienced teachers. University- and school-based faculty also work collaboratively to design and implement PDS learning experiences for new teachers, as well as for school children. Teacher education is thus transformed from the front-loading of knowledge and skills in teaching and management to experimentations through direct and regular collaboration with school sites. Wong and Glass (2011) write that PDSs have changed

(1) what student teachers did instructionally during their student teaching and field experiences; (2) how student teachers engaged more broadly with school sites and pupils; (3) how university faculty members interacted with school teachers and, more important, pupils; and (4) how cooperating teachers and other school personnel were prepared to partner with university faculty members and candidates to design and deliver instruction.... These innovations all contributed to building a foundation – of new relationships, new roles, new practices, new dispositions – on which all adults increasingly focused on student learning and their contributions to it (p. 407).

PDSs are often documented in the research literature as intervention tools that promote self-reflection. They may, for instance, be led by an experienced school teacher to observe students with learning disabilities, plan an instructional intervention, and assess and compare student performance (Baker, 1999). In other cases, teacher candidates are part of the institutional operations that provide resources to students, their parents, and communities (Trachtman, 2007). On this highly contextualized, communicative platform, teacher candidates gain insights into and reflect on the learning process and their own teaching effectiveness as tutors, whereas struggling students receive focused instruction and one-on-one attention.

Sharing the four goals of PDSs to “enhance pupil learning, improve field experiences for candidates, engage K-16 educators in continuous and targeted professional development, and use action research to inform teaching and learning in schools” (Wong & Glass, 2009, p. 8), a PDS can be viewed as a set of “social learning spaces” (Basile & Gutierrez, 2011, p. 520) where all participants – K-12 teachers, students, staff and administration, university faculty, and teacher candidates – bring expertise and resources to their learning partners and at the same time “negotiate the mutual relevance of their respective experience” (Wenger, 2009, p. 5). More than a decade ago, scholars recognized the potential benefits of PDS to all participating members in second language teacher education (both the world language teachers and the English as a second language teachers), for it creates meaningful opportunities for candidates to become ethnographic observers and classroom-based researchers to examine and reflect on skills, beliefs, and practices (Vélez-Rendón, 2002). Even though “[o]nly one publication was located that describes a PDS partnership between a foreign language teacher education program and a local school” in Vélez-Rendón’s review in 2002 (p. 465), Wong and Glass (2011) examined new literature since then and finds many narrative accounts of how PDSs significantly transform the teacher preparation program by, for instance, using student teachers as tutors in their field experience. Beyond language learning and teaching, Gebhard (1998) reveals through descriptions and analysis of a PDS between an elementary school in Los Angeles and a California State University that the practice nurtures leadership, develops the recruitment and induction of new teachers, and creates communication structures for candidates to reflect on their learning as teachers and to investigate student learning over time, among many other benefits.

The social spaces provided by the PDS are vital in terms of a sociocultural perspective on learning as dynamic social practice in which every participant plays an active role in constructing the experience and in using language as a symbolic tool (Rogoff, 2003; Vygotsky, 1978). For language teachers, “the capacity of persons, the organization of verbal means for socially defined purposes, and the sensitivity of rules to situations” (Hymes, 1972, p. 71) can be investigated, designed, and negotiated, respectively, in a context where traditional front-loading of theory and method gives way to purposeful partnership with language teachers in local schools, outside university seminar courses. In such spaces, teachers and students share past experiences, understand their changing social roles in relation with other participants, anticipate actions through the interaction of situations and events, and study how language itself works in the classroom – a community of practice – on a daily basis (Hymes, 1974; Lave & Wenger, 1991). For language teachers, the PDS offers a natural setting for a variety of communicative and authentic activities (e.g., participants checking on project progress, sharing ideas and experiences, or having more focused one-on-one conversations) that directly benefit student learning.

Houston, Hollis, Clay, Ligons and Roff (1999) studies the impact of PDS on candidates’ instructional practice and knowledge using mixed methods with participants from across elementary and secondary schools in Texas. The researchers found that due to longer time in schools, broader school-based collaborative activities, and extensive supervision, candidates were able to interact more effectively with students in the classroom in teaching and classroom management. Similarly, in a larger mixed-methods project that covers 12 PDS sites and about 180 participants (PDS candidates, non-PDS candidates, master teachers) in Equity Network PDS in California, Wong and Glass (2005) report on more positive learning outcomes for PDS candidates, which include better mentor relationships, classroom experiences, and understanding of urban schools and diverse student populations. A review of similar research between 2000 and 2010 on the impact of PDS preparation on teacher candidates reports that candidates use more varied teaching methods, have more knowledge about school and community beyond the

classroom, and are ready to teach in urban settings (Castle & Reilly, 2011). Although studies of deliberate programming for PDS candidates on school campuses include intervention tutoring and curriculum projects that target underrepresented and high-needs students and particular content areas in PDS (see Wong & Glass, 2011), little is known regarding what has been done with ELs in PDS classrooms.

Given the need for situating teacher preparation in community-based practices and the gap in literature on candidates' learning *with* ELs in a PDS setting, this article describes the preliminary findings of the learning process of single-subject credential teacher candidates in an urban PDS middle school where they co-taught and co-learned in an ELD program. In particular, the article aims to contribute to the urgent need in teacher education to facilitate teacher candidates' inquiries into second language learning in order to address the changing demographics in public schools. The author asks how candidates develop their knowledge in second language literacy to support their EL partners in this PDS setting. The project reported in this article was a pilot before the institutionalization of a PDS partnership with the middle school and its district; nonetheless, findings will shed light on ways to create conditions for effective teacher preparation for language diversity and sustainable collaboration with local school communities.

The Site

Bayside Middle School serves over 500 students from a socioeconomically disadvantaged and ethnically diverse community in a major California city. As a result of the district restructuring efforts in some neighborhood schools, Bayside, whose student body was primarily Latino, African American, and Pacific Islander, witnessed a sharp increase in student population in the past several years, with recent immigrants in particular. In 2011, more than forty percent of its students were classified as ELs. The number has since then been steadily rising as new students arrive at various points of time during the academic year. Despite the fact that the school celebrated a 40-point gain in the API in the 2010-2011 academic year across all ethnic groups and a high attendance rate of 98%, one urgent challenge is addressing the needs of the influx of immigrant students (all classified as ELs) and the need for effective instruction to which they are entitled.

One solution that Bayside implemented was to reconfigure its ELD department from a one-room one-teacher program to a three-classroom, multilevel, multi-subject matter program. The ELs were grouped into three morning English classes of basic, basic-to-intermediate, and intermediate-to-advanced levels, based on students' language testing results from the California English Language Development Tests (CELDT). Afternoon ELD courses were content based. Students were regrouped into 6th, 7th, and 8th grade-level math, science, and social studies classes taught by the same three instructors respectively. The three ELD teachers planned both a morning language course and three afternoon content-based courses for math, science, and social studies. With the help of a literacy coach sent from the district, they also co-planned under the state English language development standards. Even though the new class configuration was designed to support student learning in both English and other subjects, classroom instruction was challenging due to lack of resources and manpower when much differentiation was needed to address a range of language levels, according to the lead ELD teacher at Bayside. On the one hand, some students were close to ready for mainstream classrooms because of their knowledge of the subject matter and improved English proficiency; on the other hand, two to three new immigrant students with little exposure to English arrived every month, posing a great challenge to instructional planning for both the language class and the subject matter.

Context of the Study

With the university's mission to better prepare candidates for ELs and Bayside's need to better serve its students, a Northern California public university and Bayside initialized a PDS pilot. At its earliest stage, the program enrolled twenty-five teacher candidates in a three-credit-bearing teacher education seminar course taught on the Bayside campus, making it possible for candidates to have regular contacts with their EL students and collaborating teachers. Among the twenty-five candidates, fourteen were female and eleven male. They were trained in a variety of subjects, namely English language arts (4), Math (4), Science (3), Social Studies (9), Physical Education (3), and Art (2). Except for five candidates who regularly spoke Cantonese, Tagalog, or Spanish at home, others identified themselves as monolingual with minimum exposure to and experience with EL students. Twenty-one reported that this was their first time focusing on EL and second language development processes. At Bayside, about forty ELs participated in the study. They were 6th and 7th graders speaking Spanish, Chinese (Mandarin and Cantonese), Arabic, and Tagalog. Three ELD teachers and the school principal also joined the team effort to have the students meet the teacher candidates regularly for planned language learning activities throughout the semester.

This ethnographic case study (Emerson, Fretz, & Shaw, 1995) required detailed and meticulous data collection and analysis. The university professor collected an extensive dataset that included fifty researcher fieldnotes and analytic memos detailing class activities, two surveys and ten candidate journals on progress and struggles, thirty hours of audio and video clips of third period partner time, two hours of video footage of an end-of-semester puppet show, EL information (proficiency level, demographics, etc.), correspondence among participants, and interview transcripts, during the semester-long team planning and instruction. Analysis of the dataset in its entirety involved repeated reading, organizing and categorizing of data. Guided by the research question of how candidates develop and reflect on their knowledge in second language literacy to support their EL student partners in a PDS setting, the inductive process (Emerson, Fretz, & Shaw, 1995; Erickson, 1986) entailed organizing all data by candidate name, by ELD class, and in chronological order. After reading the whole data set multiple times, the researcher/university professor developed preliminary coding around (a) candidates' knowledge of home languages (L1) and second languages (L2) development (e.g., communicative competence, language transfer); (b) the kind of instructional decisions that responded to this knowledge (e.g., teaching vocabulary, writing, pronunciation); (c) the ways that (a) and (b) interrelated over time and influenced candidates' previous experience, assumptions, and knowledge building; and (d) different geographic, cultural, and social spaces made possible in PDS settings and their impact on candidate learning. The findings will shed light on innovative ways and conditions to support content area teachers to be better prepared for ELs. The following sections illustrate how an EL-focus PDS model was created for the candidates and the ELs, what knowledge about learning English the candidates focused on over time, and how working with ELs and other teachers benefitted their development as language teachers during the 14-week long on-site credential training at Bayside.

Building a Learning Village: An EL-focus Model

One vital factor to promote language learning is creating an environment that values the sociocultural nature of learning among all students and their support system (Lopez & Iribarren, 2014). It truly takes a village. This PDS community, the “village,” hosts EL students and teacher candidates, as well as ELD teachers, each playing an active role in the cultural practices of learning and teaching (Lave & Wenger, 1991). In a preparation program that rigorously addressed equity, social justice, and culturally responsive pedagogy, the majority of the candidates felt excited to meet ELs in person, but “worry [they] may fail miserably in front of [their] ELs” (Candidate survey results). Their initial survey revealed that 70% of the candidates doubted their ability to help ELs as language teachers. To scaffold their learning with the ELs, a collaborative learning community was created to respond to the particular resources in the Bayside school community and an interdependent relationship among all involved. This learning community was structured in such a way that language practices were spontaneous, fluid, and responsive to the actual interactions among members in an anxiety-free environment. The seminars at Bayside made it possible for candidates to share time and space with ELs on a weekly basis. Thanks to this group effort, the three-hour seminar was divided into two regular segments – planning and reflection among candidates, and classroom observation and group work with ELs. The former was dedicated to such seminar content as language learning theories and lesson planning; the latter to team projects with ELs.

As Figure 1 reveals, all members had something to offer to, and learn from one another. Candidates worked closely with ELs with support from the university professor and ELD teachers on teaching strategies and disposition. Through teamwork, candidates observed their EL partners, participated in their language learning activities, and reflected on the transformation of their understanding and skills (Vélez-Rendón, 2002). ELs, at the center of the community, were not the receivers of language instruction, but active producers of English with attentive listeners and helpers around them. In their letters to their student teacher partners, many students expressed how “free” and “confident” they felt when their “friend teachers” were truly interested in their stories and questions. The collaborative practice is not an intervention by a distinct learning/teaching method, but rather the construction of a “village” where members make sense of, and aim at, the most productive ways to learn English with less anxiety and in their own pace (Lucas & Villegas, 2013).

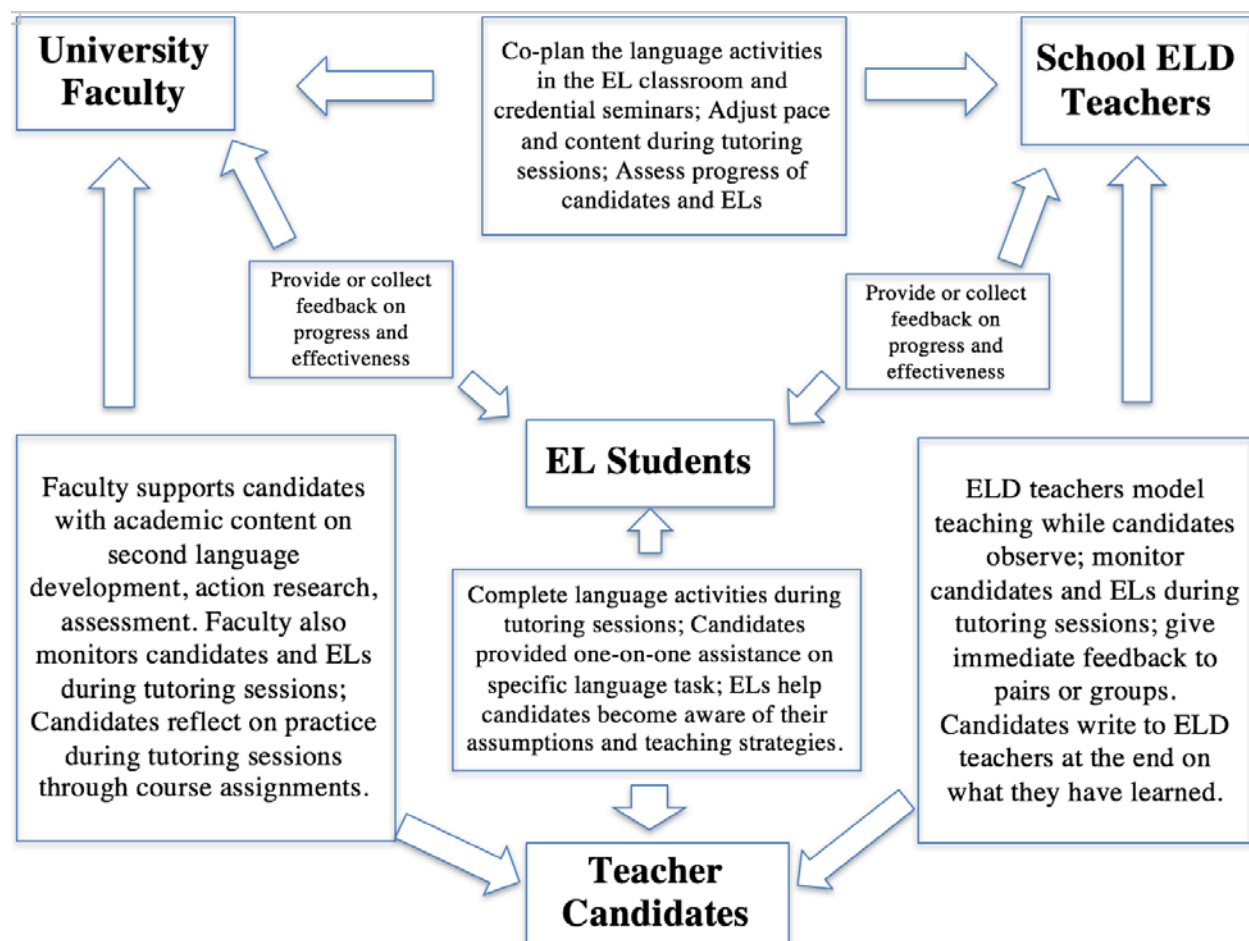


Figure 1. An EL-focus PDS model at Bayside.

Reflecting on the Basics of the English Language

The safe and stress-free learning environment promotes candidate understanding of what develops in language learning and how to make language learning happen in classrooms. It was clear on the candidates' first day in the ELD classrooms that the main learning activities – lectures, teacher-led discussions, and worksheet routines – were centered around the building blocks of English language vocabulary, grammar, and sentence structures, or the “basics” (Dyson, 2013). The textbook-based ELD instruction at the beginning of the semester reflected a strong influence from traditional views of language learning as a linear progression of acquiring linguistic features (Valdés, 2001); still, it presented the reality and authenticity of language instruction for ELs in public schools. From spelling, pronunciation, word definition to functions, tense, parts of speech, and from worksheets to inquiry, the candidates examined, through observation, how students responded to the basics and explored conditions where the basics could truly become useful tools for students.

Form vs. Meaning

During a typical grammar activity on present participles, Kristen, Ada, and David were discussing with three students how the praying mantis got its name. The plan was to explain that the present

participle – a verb in its –ing form – can be used as an adjective to describe a noun – a performer of the action identified by the participle. The group conversation, however, grew into distinguishing two intriguing phrases, the *praying* mantis versus the *preying* mantis. Both seemed to make sense at first. Kristen described herself as “stumped” as her student.

I did not know the answer [to how the praying mantis gets its name before reading the grammar note on present participles]. I assumed it was because it looked like it was praying, but then I heard David explain it was because it preyed on its male partner. What was confusing for me was the spelling of ‘praying’ mantis. The ‘a’ versus the ‘e’ in the word meant a world of difference. When I drew a picture of a cross and put my hands together and gestured that I was praying to it, [the student] understood that, but could not see how it related to the mantis (Candidate Kristen, fieldnote).

As documented in their fieldnotes, candidates tried to gesture as in prayer, comparing the postures of a prayer and a mantis. They took turns to argue how “praying” or “preying” would help convey the image and actions of a mantis. Students nodded and tallied their vote on “praying” or “preying” with the help of their digital dictionary. Several Chinese girls believed that “preying” was appropriate because the mantis was “a good (skillful) predator” rather than “a quiet person in a temple.” The group enjoyed a conversation that “transformed [present participles] from static rules to communicative resources” (Dyson, 2013, p. 5). The negotiations reminded the candidates that “[l]earning and teaching English should not just focus on grammatical rules (though I do need to review my own knowledge in grammar). Rather, students need to communicate meaning while learning to use the grammar tools” (Candidate Ada, fieldnote). This revelation is no new knowledge, as the notion of communicative competence in language learning, together with best practices to promote students’ communication skills, has been highlighted in second language learning textbooks and scholarly publications (Richards & Rodgers, 2014; Rothenberg & Fisher, 2007). Nonetheless, it was only after a conversation with their ELs about what foundational, linguistic, and sociolinguistic knowledge makes sense in their learning and how students made sense of the basic language features (in this case, the grammatical function of a gerund) that the candidates started examining the rules of the language and ELs’ response to the basics.

Impact from First Language

Similarly, the groups tackled confusions about parts of speech and the semantic (or pragmatic) use of utterances. For example, Wayne documented an exchange with his student, Jack, when he greeted him one day.

I sit down and ask him, “Hey Jack, how are you doing?” I get the regular response, “huh?” So, I repeat it again, but slowly. He hears me better this time and answers me, “Oh, one-fifty and one-sixty.” I’m confused so I ask him to repeat it, “huh?” He points to his book and says, “I’m doing one-fifty and one-sixty.” I realize that he thinks I had said, “*What* are you doing?” as opposed to “*How* you are doing?” So I emphasize to him that I asked how he was doing. I gave him ideas of what he can say in response to someone asking him that. “How you are doing? So, you can say, ‘I’m doing well.’ Or you can say, ‘I’m tired.’” He nods and we move on (Candidate Wayne, fieldnote).

Many candidates shared Wayne's experience. In their reflection, the candidates agreed that EL students might not be so attuned to minute changes in language form (*how* vs *what* in the sentence) as native speakers until experimenting with the language in real social interactions. In Mandarin, which is Jack's L1, the word "do(ing)" would make better sense based on translation if paired with "what" than with "how," and would not have any indication of general greeting. Jack's puzzled look and unexpected response suggested a need for candidates to offer a comfortable environment for ELs to play with the language without feeling humiliated and more importantly, to show ELs how they are using their L1 to help convey the meaning. This critical discussion on the transfer from L1 to L2 (English) will build ELs analytical skills in learning the language.

Sounding Out vs. Comprehension

One commonly shared struggle among candidates was ELs' not yet "being able to sound out reasonable spellings" (Dyson, 2013, p. 3), by breaking sentences and words down to syllables. In their journals, candidates argued strongly in favor of getting students' pronunciation and intonation right, or creating a beat, as described by Andy.

After a few times saying it [photosynthesis] slowly, I would ask [my student] to say the word faster in the tune of a catchy beat. The process of picking up the beat made her memorize the way it should be said when she saw the word again. Creating a beat to the word made it fun and helped [her] retain the proper way to pronounce photosynthesis in a fun way (Candidate Andy, fieldnote).

However, candidates soon realized that sounding out was not helping students with their understanding of texts, even though they believed otherwise at the beginning of the collaboration before course readings and discussions. Anne was one of the few candidates noticing her students' struggle, as well as her own.

I could tell [my students] strive to understand English in every aspect of the language and were working very hard at it, but perhaps I should not have thought that they would get it after several rounds of reading aloud (Candidate Anne, fieldnote).

Beth further detailed a failed attempt to rely on sounding out to strengthen reading comprehension.

I try to get [my student] to read the sentences out loud so that he is reading for meaning, but he dismissed my attempts to get him to refocus. He would rather just look up the words or try to guess so that he can get the meaning faster (Candidate Beth, fieldnote).

Discussions about why the seemingly natural, basic sounding-out activity failed to work took place in the on-site seminar that the university professor facilitated. Speaking from their experience with the students, the candidates drew the conclusion that without a thorough understanding of second language learning, their intuition as native speakers to rely simply on sounding-out to teach ELs would not be effective, which was especially true when students' L1s carry different linguistic features and cultural backgrounds (e.g., Osborne-Wilson, Sinatra, & Baratta, 1989).

In addition, the candidates identified their students' frustration during collaborative hours when they struggled to express themselves in English despite heavy loads of grammar exercises on language accuracy. Seminar focus thus turned to some fundamental principles of building second language literacy guided by a sociocultural view of language learning (e.g., Zuengler & Miller, 2006), as well as a range of teaching strategies (e.g., Rothenberg & Fisher, 2007). The candidates analyzed worksheet drills that overwhelmingly emphasized the mechanics of English, rather than situating language skills in communication. They also recognized the opportunity the collaborative hours brought all when EL students were equally eager to participate and share ideas.

Co-teaching a Communicative Unit

With an understanding that language learning is highly contextualized and more complicated than the studying of the basics, the candidates experimented with a pedagogical strategy that pushes meaning-making and interactions. After three weeks of observation and participation in the ELD classroom, a culminating project marked the start of this new experience in which students strived for a more sophisticated and communicative level of language learning. Classroom activities shifted from pattern drills to a holistic learning experience for the ELs. With help from the candidates, the students performed a puppet show using the scripts they wrote based on a selected story³. Unlike the one-dimensional, accuracy-driven vocabulary and grammar exercises in phase one, here the ELs had the opportunity to select a short story, learn to adapt the story into a four-act play, write scripts for each act (including stage directions, narration, and dialogues), role-play the acts, and perform on stage before a live audience. As ELs' partners, candidates aimed to address various language demands of this performance-based unit, support their students throughout the project, and reflect on their learning as language teachers.

The communicative project encouraged teamwork by candidates and their student partners. In the seminar, the candidates planned for segments of the unit, aiming to promote clear understanding of the story, accurate script, and effective delivery rather than basic vocabulary and simple sentence structures. Candidates read the stories with their students, negotiated events that were key to the plot, and worked on scripts that would retell the plot, describe personalities, and interpret funny moments. As vocabulary and general comprehension checks were discussed along the storylines, group conversations focused more on personal interpretations of the story. The candidates asked students, for instance, if it was okay to forgive the wolf for blowing down the pigs' houses because of his allergy, or why Mr. Peter never used the last of his three wishes, or which they thought was the most crucial step Rikki-Tikki-Tavi takes to defeat the two snakes. Candidates found that as students tried to share and clarify their thoughts, they were more aware of the text and interested to explore the details.

Writing scripts for the puppet show sounded like a daunting task to the EL students and the candidates at first; however, with guidance from the ELD teacher and the university professor, the collaboration groups treated the writing process as solving a jigsaw puzzle with scaffolding. Candidates prepared slips of paper on which key events and dialogues were printed. They asked

³ Based on students' level, interest, and the ELD curriculum, three ELD classes picked the following books, respectively:

Class A: Scieszka, J. (1996). *The true story of three hungry pigs*. New York: Puffin Books.

Class B: Aiken, J. (2001). *The third wish*. Downloadable at

<http://aparker.wiki.hoover.k12.al.us/file/view/The+Third+Wish+by+Joan+Aiken.pdf>

Class C: Kipling, R. (1894). *Rikki-Tikki-Tavi*. Charelston, SC: CreateSpace.

students to group these cues into four scenes with rationales, then add their own voices in the form of dialogues and narration using a bank of words, phrases, and sample frameworks to organize ideas (e.g., describing events chronologically, turning dialogues into narrative or vice versa). Writing also involved rounds of reading and revising among group members with the candidates taking the lead. As a student in Class A described in her free write, “We rote [sic] the script over [and over again] in our own sentences and our own words. [It] was a little bet trick [sic] but we all did good. And we did it as a group so that made it easier.” Group formats changed constantly based on goals. For example, candidates in pairs sometimes worked with a small group of five students who covered the same scene after one-on-one groupwork on specific lines or dialogues.

The rehearsal was “the best time to observe all aspects of language learning taking place at once” (Seminar discussion transcript). During rehearsal, the class practiced reading the scripts aloud first in small groups, then in larger groups, and eventually on stage. The candidates modeled the dialogues, provided feedback, and cued students. Class B’s production of *The Third Wish* was both representative and significant in revealing how contexts and a communicative goal supported learning and provided the students with a “first in life-time performance, and the most exciting experience” (a letter by an EL student to candidates).

The first unforgettable moment was when the candidates role-played the show in front of students to demonstrate how to make the dialogues come to life using tones and gestures. As Bridget documented,

We, as a group, acted out the play garnering the enthusiastic adulation of our student mentees. Everyone did an excellent job, particularly Kent who shrunk himself down to the size of a leprechaun and shuffled around the classroom as the antagonist “Little Man”. Laura and Mindy flew around the room as the swan sisters, and the narrators, which included myself, were sure to add the sound effects. We made mistakes, over-acted, laughed a lot and showed the students we too were learners (Candidate Bridget, fieldnote).

At the same time, Candidate Joanna wrote about her student’s reaction.

The students really seemed to enjoy the performance. They laughed and applauded and were smiling while we performed. After we completed our acting, Jenny [student] told me that she really liked it and that we are funny. I told her that she can be loud and speak clear and have fun at the same time. She nodded her head and smiled (Candidate Joanna, fieldnote).

Jenny was not the only student who was excited and impressed. Candidate Alyssa documented her session with Abay, who played the lead role of Mr. Peter in *The Third Wish*.

Abay was eager to make sure no mistakes were made. He especially liked the line Mr. Peter said to his wife, “Mama Mia! You are so Beauuutiful!” We pair-read with other tutors and students through the whole play multiple times. Abay fully embraced his role and turned out to be a great actor. He was the loudest and most expressive student in the class! (Candidate Alyssa, fieldnote).

In “a rumble of activity” as Candidate Laura described it, the students were much more relaxed and communicative than before with the scaffolding of the scripts that included both everyday English and “fancy and complicated English” (a student’s definition of academic English), which initially sounded intimidating to the ELs. The opportunity to participate in multiple rounds of reading, writing, discussing, and role-playing gave them (as well as the candidates) a sense of purpose and accomplishment. Even Dailan, seemingly the quietest student in the class, volunteered a letter to the candidates. “I liked the reading part, because I learned how to read the text. We now understand [the story] better. I read more fluently. Thank you!” Students’ interest and effort were clearly reflected in their stage performance with the handmade puppets. “They tried their best to enunciate their lines, moved across stage, and used body language to demonstrate their emotions against large drawings of a bungalow in India, for example, or with various hand-made hats as the pig and the wolf” (Candidate Cynthia, fieldnote). The school community was their audience, whose laughter and applause filled the auditorium.

This communicative project was enriching to candidates and their students in many levels. First, unlike grammar worksheets, adapting a written story into a performance was motivating, contextually rich, and academically challenging for ELs. For instance, Olivia noticed her student’s change immediately after the instructional focus shifted from worksheets to the puppet show.

[My student] pointed out which part of his line was his favorite. I thought this was very sweet. I noticed that he was engaged and motivated in a stronger way because he was actually accountable for the work he was doing. Sometimes with worksheet homework he is in a hurry to finish and just get an answer down. With this assignment, he took a lot of time and care in rehearsing because of the pressure of the eventual performance. I learned just how challenging it is to remember pronunciation rules! (Candidate Olivia, fieldnote)

Candidate Reese expressed her excitement in the project. The experience seemed equally rewarding and motivating to her and her peers.

We had a good time at our table acting out the scenes and getting into character. I think this play is a great idea and exercises many skills that EL students need. They are having the opportunity to practice pronouncing their lines, writing scenes, reading their lines, speaking with intonation, gesturing, speaking loudly and publicly, while also being introduced to American literature. What a well-rounded assignment! (Candidate Reese, fieldnote)

The communicative project brought the community together as candidates and students tried out strategies to improve their scripts and performance together; it also reflected the reciprocal nature of learning, as rightly put by Candidate Lee: “[t]he class really seemed to enjoy watching us perform for them and they stayed focused as we, in very dramatic fashion, with flamboyant and melodramatic gestures, performed the same play they put together, reinforcing the reciprocal nature of learning—they taught us and we taught them” (Candidate Lee, fieldnote). Other candidates, such as Monica, reflected on the design of the project.

The experience of helping [students] prepare for the performance also showed me the importance of scaffolding in teaching English. Rather than having the students write their own play, we chose to have them read an existing one. I think this was a good idea. It gives them immediate practice with written English and pronunciation. Maybe toward the end of the year they could write their own play (Candidate Monica, Fieldnote).

Indeed, candidates were thrilled to see lights in their students' eyes and confidence in their participation. With a combination of reading, writing, speaking, and performing activities, EL students were happy they could finally "do something in English." In her note to her tutor, Weinan was glad that she was "finally feel[ing] like I can speak English!" She added that she "learned it is not enough for one person to read well. We need team work!" (Student Weinan note, translated from Chinese).

The excitement also derived from the lines in the puppet show that EL students would never be given a chance to practice in class.

I felt very nervous when I did the puppet show because maybe I can't read correctly or the microphone can drop, or I forget how to read the word, but [the teacher candidates] helped me a lot. They read with, taught how to read the words, like read fast some words like baby cobras, or read slow, as the people can understand, and to breathe in some parts, and correct some wrong words that other students wrote. I think I can read better some words, ... relax and just read. I learned is to always practice more and always "follow the flow" (Student Henrique, note to candidates).

It was productive for Henrique and his classmates to learn English through such a content/content-rich activity. "It is magical to follow the flow of the interactions with my students," as Candidate Richard wrote. The contrast between a decontextualized worksheet study of English grammar and an accumulating collaborative project on developing communicative skills offered candidates first-hand experience as classroom teachers and language teachers.

Discussion

This paper reports how single subject credential teacher candidates understood language teaching and supported middle-school-age ELs during the one-semester intensive fieldwork in the on-site pilot PDS program at Bayside. The most compelling lessons learned in this PDS environment addressed candidates' developing understanding of language teaching strategies and undergirding principles throughout their collaborative project, where they learned to analyze the purpose, process, and results of classroom language exercises. First, the candidates delved into the notion of the basics — the fundamental language tools for writers and speakers to put their ideas together. They found it confusing and counterproductive to explain words without referring them to situations. They argued that students might not notice what differences a change in language form would make in the meaning of a sentence or an utterance until they are contextualized. Candidates' most popular strategy of sounding out words could not fully support students, as correct pronunciation of syllables does not necessarily translate into understanding of meaning. In addition, for students whose L1s are logographic instead of phonologic (e.g., Chinese, see Osborne-Wilson, Sinatra, & Baratta, 1989), sounding-out as a primary strategy might probably complicate students' learning to communicate meaning. In other words, the first lesson evolved around the realization that language development goes beyond rote memorization of basic grammar, vocabulary, and sentence patterns, and that language development is not simply sounding out letters and words. Instead, language development is a nonlinear, meaning-making process that happens only when learners actively use the language in various social situations with real purposes (Halliday, 1980; Valdés, 2001).

The second lesson highlighted the importance of planning and organizing engaging and effective activities that offer ELs an opportunity to communicate, as well as basic elements in such a communicative activity. Candidates' experiences and observations in the accumulating puppet show project revealed that when a community of language users makes meaning and shares stories, they also build relationships and understand the symbolic tools (e.g., multiple languages in written and/or oral form) that they use (Dyson, 1997). From selecting key plots for the four scenes to rewriting dialogues to performing the puppet show, the level of creativity, thoughtfulness, and resilience demonstrated by the ELs clearly indicated the conditions for effective language learning, that is, students need opportunities to use the language in contexts when they form, negotiate, and clarify ideas with other members of the class. EL students thrive and feel more motivated to perform well when they perceive they are making progress in learning (Busse & Walter, 2013). Meanwhile, the candidates experienced a sense of purpose in designing and carrying out a language project, as well as intrinsic and extrinsic rewards in the process (Jackson, 1990).

Student response to the communicative project further testified to the need and meaning of communicative tasks, as well as a supportive learning environment, which foreground a purpose to communicate and connect basic building blocks with the sociolinguistic, pragmatic, and functional skills of delivering (Hymes, 1972). Language as a symbolic and social tool has to be used for a purpose and in a community of participants (Vygotsky, 1978). As seen in the praying mantis discussion, the turn-taking of characters in the puppet show, and the use of tones, gestures, and facial expressions among characters, the negotiation demonstrated how important context is in creating meaningful interactions, and in giving students an opportunity to relate to what they know. For the ELs, the communicative project was much more challenging and stimulating than a multiple-choice worksheet on reading comprehension. With teacher candidates and peers at their side, they shared their ideas, asked questions, and explained their choices. Candidates in turn experienced how they could integrate reading, writing, speaking, listening, and performing to engage students. As most candidates did not have former training in teaching English, the collaboration introduced them to the notion that every teacher is a language teacher (Fan, 2013) because building language literacy skills among ELs lies in teachers' concerted efforts from all subject matters to create opportunities for students to express themselves in English.

Reflection on the PDS

Bayside as a PDS offered social learning spaces with rich opportunities for candidates to make sense of the language, ELs and teaching, and to "merge theoretical and practical learning" (Darling-Hammond, Pacheco, & Michelli, 2005, p. 460). First, in this safe, supportive, and productive environment, all parties were actively involved in meaning-making and problem-solving language activities where they supported each other by contributing understanding and experience from their funds of knowledge (Moll, Amanti, Neff, & Gonzalez, 1992). Because of the rapport and collaboration among all members, this learning community was able to experiment with a highly communicative unit that activated EL interest and passion, eased their fear of failure (Swain, 2013), and pushed for higher expectations in language production (Fillmore, 2014). The PDS setting enriched the social and academic learning of both the students and their teacher candidate partners through supervision from the ELD teachers and the university instructor, who guided the candidates to observe, identify, and inquire how their students responded to the language assignments.

Second, the PDS setting rendered a reflective approach that encourages candidates to analyze two different curricula focuses – grammar-focused vs. communication-driven – in real classrooms. The successful puppet show project demonstrated that it is possible to create a “permeable” (Dyson, 1997) and yet rigorous curriculum that gives students a role to play and that differentiates language tasks based on their social and linguistic backgrounds (Lucas & Villegas, 2013; Turkan et al., 2014). In their seminar, candidates constantly asked how a work session with ELs could situate grammatical knowledge in building reading, writing, speaking, and listening, and what scaffolding, other than individual attention and feedback, could be offered. At the same time, they analyzed students’ powerful demonstrations of what worked and how they made sense of language form and meaning every week. A combination of weekly journals, interviews, and teaching material critiques further grounded their learning with their ELs. “I honestly could not have asked for a better lesson for these students and for myself as a social study teacher,” as candidate Laura noted in her final report on her experience at Bayside.

Implications

Pre-service teacher education is crucial in the development of linguistically responsive teachers in public schools (Lucas & Villegas, 2013), in that it lays the foundation for the set of knowledge, skills, and disposition, as well as the inquiry methods needed to understand the complex nature of culturally diverse classrooms. Situated teacher learning in university-school partnership, such as the one described in this study, offers candidates an incentive to understand the need to build specialized knowledge in literacy and second language learning, to create a community of language users, and to work with ELs as active participants in such a community. This practice explored ways to establish a collegial community where such questions as what it means to learn a second language and how to make the learning process meaningful and productive for ELs are explored by teacher candidates, university faculty, and schoolteachers. Such professional development opportunities should be an integral part of teacher education programs to fill the gap between theory and practice. Candidates will be transitioned to systematic training in such areas as lesson planning, instruction, and assessment, along with seminars on equity, social justice, and empathy. Future research is needed to investigate how EL students negotiate multiple resources and learning opportunities made possible by efforts to build community-based teacher education programs.

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Perceptions of Integrated Experiential Learning of Graduate Marketing Students

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Abstract: Experiential learning projects have become a mainstay of a multitude of undergraduate business courses as they allow students to apply theoretical knowledge to real-world issues. At the graduate level, the use of case studies is a primary teaching method, but one cannot fail to notice an increase in the interest and use of experiential learning projects and assignments. As more emphasis is placed on the practical application of theory across the marketing curricula, buttressed by accrediting agencies, the need for incorporating these experiential learning projects has become an integral part of many university curricula at both graduate and undergraduate levels.

While the inclusion of these projects has been in practice for some time, the ideal addition to these experiential elements is restricted to a single course. This study examines the impact of including an experiential learning project that was framed across two graduate courses for an individual client. This study adds to the existing knowledge by using a unique integrative approach, across two separate graduate marketing courses, providing students with a progressive real-world experience over an extended period of consulting interaction and time. Student perceptions associated with the efficacy of this extended experiential learning exercise are also furnished.

Keywords: Client projects, service learning, experiential learning, graduate marketing courses, business school.

Introduction

The Association to Advance Collegiate Schools of Business (AACSB, 2013), in their accreditation standards, articulated the need for management schools to engage with the community. These standards also highlight the need for creative and innovative student projects that engage and deepen student understanding of the course content. The intent is to strengthen student value for potential employers with specific skills that enable them to make early contributions.

In tune with the new AACSB standards, Hart and Mrad (2013) said, that gaining practical experience by working with and in businesses before graduation is also necessary for graduate-level business students. Companies now want their new employees to “hit the ground running,”

challenging business schools to develop keen critical thinking, problem-solving and professional communication skills in the students before graduation.

Critical thinking and communication skills can be developed successfully by using experiential learning projects. These experiential learning projects are an ideal way to bridge the gap between student learning in the classroom and employer expectations on the job (Clark and White, 2010; Maskulka, Stout, and Massad, 2011).

Literature Review

Traditionally, academicians have relied on the lecture method of teaching with the instructor as the central figure in transferring information to foster student learning (Kennedy, Lawton, & Walker, 2001). However, the lecture method is often criticized for not stimulating critical thinking and communication skills necessary for students to be successful in businesses upon graduation (Munoz & Huser, 2008). An increasingly popular alternative to the traditional lecture method of instruction is experiential learning (Warren, 2012). This same philosophy has been captured in the metaphor that a faculty member needs to transform himself or herself from “being a sage on the stage to a guide on the side;” that is, to become a creative facilitator and an instrument that aids learning and self-discovery.

Keeton and Tate (1978) described experiential learning as an educational opportunity in which the learner is in direct contact with the studied realities. However, Kolb (1984) defined experiential learning as “a process whereby knowledge is created through the transformation of experience.” Kolb also said that experiential learning must include a concrete experience, reflective observation, abstract conceptualization and active experimentation. Most importantly, the learner must be involved in all these activities, for then and only then, the activity should be called an experiential learning activity.

Further, researchers identified several critical components needed in experiential learning, such as, interaction among the students, company personnel, faculty and, most importantly, keeping students in contact with the real-world scenario (Gentry, 1990). Experiential learning involves students with the experience and later, reflecting on the experience to draw conclusions based on their experiences that will and can be applied in the future to improve their performance (Frontczak & Kelley, 2000). Lecture-based classes promote passive learning (Kennedy et al., 2001), and leave students little time for reflection (Civi & Persinger, 2011). Experiential learning helps foster critical thinking and problem-solving skills (Kennedy et al., 2001) and positively impacts student learning (Warren, 2012).

There is a broad-based consensus in the efficacy of experiential learning practices. Several researchers have found experiential learning techniques to be effective in teaching in the marketing discipline (Bridges, 1999; Drafke, Schoenbachler, & Gordon 1996; Gruca, 2000; Hamer, 2000; Petkus, 2000; Speckt, 1985). These researchers recommended the use of experiential marketing projects as these learning experiences resulted in higher student engagement, improved understanding, and superior information retention.

Previous researchers proposed the use of many experiential learning strategies in the marketing curriculum (Bridges, 1999; de los Santos & Jensen, 1985; Graeff, 1997; O'Hara & Shaffer, 1995; Wynd, 1989). A more recent experiential learning technique has been to assign real company projects to students (Roth & Smith, 2009). A real company project enables students to work with organizations and solve real business problems.

Richardson and Raveed (1980) and de los Santos and Jensen (1985) mentioned that real company projects provide a conduit between theory and practice. Real company projects help students integrate the material taught in the classroom and ensure continuity (Gremier, Hoffman, Keaveney, & Wright, 2000; Humphreys, 1981; Razzouk, Seitz, & Rizkallah, 2003). Bridges (1999) suggested that incorporating real company projects into the curriculum has the added benefit of providing consistency in the students' view about the discipline of marketing because these projects are interactive, real world, and creative.

Craciun and Corrigan (2010) stated that graduates without prior work experience or who are not involved in experiential learning might face challenges as the marketing managers expect their recruits to think holistically to develop solutions to real-life problems. To help prepare graduates, many academicians teaching marketing embraced an integrative approach by including real company projects (Bobbitt, Inks, Kemp and Mayo, 2000; Darian and Coopersmith, 2001; Elam and Spotts, 2004, Munoz and Huser, 2008). These projects help graduates apply and refine skills and concepts learned in different marketing courses, compelling them to develop holistic solutions (McCarthy, 2010). Students feel a sense of accomplishment through experiential learning providing them the opportunity to integrate all they have learned and put it into action (Hagan, 2012).

Marketing is a discipline where the use of experiential learning methods is both applicable and advisable. Marketing is taught in a classroom where students need to understand customer needs/wants/desires as a process and then develop marketing plans that allow required satisfaction while achieving the company's objectives. This marketing plan involves analyzing the market and the competition, developing strategies and optimizing the elements of the marketing mix. Therefore, it becomes necessary for students of marketing to understand the many functions of a marketing manager – gathering information, evaluating alternatives and decide the best option to deliver superior customer value (Camarero, Rodriguez and San José, 2009). The use of experiential learning projects across business courses in general and marketing courses is extensive. Researchers have used experiential learning in a multitude of marketing courses. For example, O'Hara and Shaffer (1995) used experiential learning in personal selling and purchasing courses. Bobbitt et al. (2000) used experiential learning in marketing principles, personal selling, and sales management courses successfully. Students of these three courses practiced application of the concepts and develop skills discussed throughout the courses and evaluated the project as an enjoyable exercise, adding to their ability to learn and use the theoretical material. Further, there is a widespread consensus about the many benefits of incorporating experiential learning in teaching undergraduate and graduate marketing research courses.

While experiential learning projects have widespread adoption at the undergraduate level, the same is not so at the graduate level. Lack of popularity in these experiential learning projects in graduate courses can be ascribed to the attributes of the student population. In graduate courses, a higher percentage of students are adult learners. These adult learners have full-time jobs, family, and other responsibilities. These adult learners have a pressing need to achieve a school-work-life balance. Students also have varied backgrounds and experiences and may live far from the college campus, making it difficult to come together to work on team projects (Hagan, 2012).

Research Contribution and Differentiation

Research conducted in the past has mainly explored the use of real company projects in undergraduate courses with a limited examination of their use in graduate-level courses. This

research study contributes to the literature by examining the impact of incorporating an integrative experiential learning project across two graduate-level marketing courses for a single client.

The study attempts to identify student perceptions associated with the impact of an experiential learning project on their learning during this extended learning opportunity. The primary objectives of this research study are to measure student perceptions on (1) their motivation to learn; (2) a real company project as a useful learning pedagogy; (3) the real company project's contribution to developing knowledge and skills in the subject area; (4) the personal benefits gained from the actual company project; and (5) the overall assessment of the real company project.

Project Description

Current literature that examines the impact of experiential learning over multiple courses is rare. The authors found only two studies that evaluated the effect of experiential learning over multiple course offerings. The first study by Bobbitt et al. (2000) introduced the idea of integrating three marketing courses around a typical class project. They combined Principles of Marketing, Principles of Selling, and Sales Management classes. One group of students in the Principles of Marketing course created ideas for new goods and services. Another group of students from Principles of Selling class created a mock trade show, and students in the Sales Management class chose a product and created a role-play sales call from the mock trade show. Students in all three courses enjoyed applying the concepts and skills discussed throughout the courses. This approach to curriculum integration provided students with a “hands-on” opportunity to use marketing concepts and linked the critical component of realism, which is possible only through working with a real company. Another such study by Elam and Spotts (2004) integrated marketing management, campaign planning and management, and desktop publishing courses together and invited a real company to take part. This research is based on the same premise. Specifically, this study examines the impact of an integrative experiential learning project across two graduate courses in working in collaboration with an individual client.

Project Organization

Phase I

In phase 1 of the project, students enrolled in the (1) Customer Centric Innovation, or (2) New Product Development course were required to develop a new product by collaborating with their respective client. This was a collaborative effort, and the intent was to help develop logical new product offerings for each of the clients.

1. Graduate students enrolled in the Customer Centric Innovation course worked in teams of five to develop a “Business Plan Team Project to develop a new product or service” based on the guidelines provided in the textbook *Developing New Products and Services*, Sanders (2012).

2. Graduate students enrolled in the New Product Development course used a “Four-phase integrated new product development (iNPD) process” based on the textbook *Creating Breakthrough Products* by Cagan and Vogel (2013).

At the end of the semester, student teams presented their ideas to the clients. The clients evaluated the student projects and, based on the feasibility of the ideas presented; they selected new products suitable for a potential launch.

Phase II

After the completion of the two matched courses, the students were channeled into a course on (3) Contemporary Issues in International Marketing, a required course for graduation.

In this course, the same student groups who had developed new product offering for their clients were required to create marketing plans to launch the products in international markets that had the most significant potential. To formalize this phase, students used “Country Notebook” to develop Marketing Plan based on the textbook “International Marketing” by Cateora et al. (2012).

Project Method

At the start of the semester, the faculty member presented the scope and nature of the experiential learning project to the student groups. Clients visited the classroom and submitted briefs about the company, discussed the organizational issues, business goals, and objectives.

After some work within their group, the student teams presented an initial proposal to the client for approval. The intent was to include and involve the client from the start of the project. This compelled students to be accountable and deliver professional reports to external constituents early in the process. Students were given a multitude of resources, including templates, and content outlines whenever applicable. This strategy of having the clients interact with the student from early on also helped formulate and align client expectations with the directions taken by the students, resulting in increased client and student satisfaction levels (Kunkel 2002). Clients were encouraged to provide feedback, suggest and recommend changes depending on their business needs. Students were required to incorporate this feedback and make all reasonable changes as indicated by the client and present a changed plan for the client’s approval. Client visits were also integrated into the course to provide students with firsthand knowledge of their client’s operations. This provided the students with a keen understanding of the client’s processes and offered valuable insight into a professional work environment.

As the semester progressed, students collected required data and prepared formal written reports. Throughout the semester, the faculty and students met during the regular class time for lectures, case studies, and discussions covering the course content to deliver on the stated overall course objectives. Besides these subject related discussions, student groups were also required to provide their fellow students with two briefs, updating the entire class on the fundamental aspects of their experiential projects. Students were encouraged to work with each another, share insights, and use the class community to improve their overall effort.

At the end of the semester, student groups presented their findings and recommended actions in a verbal presentation and final written report to their peers, company executives, the instructor, and the business school faculty.

Feedback to Student

Besides the regular feedback to the students during the entire experiential project, the instructor provided verbal and written feedback three times to the students on the experiential project. The

experiential project grade was a significant (35%) of the overall course grade. The teams also received nongraded feedback from their respective clients at the end of the project. This closed the feedback loop and was considered most valuable and well received by students.

Clients were asked to provide feedback to the students and faculty members only after they had reviewed the final projects. The feedback received from the client consisted of a written summary of comments that were shared with the students. Mostly, this feedback was positive, complimenting the student's work and appreciative of the multitude of creative approaches. The business clients were complimentary of the fresh vantage point provided by the students. Many clients reported incorporating the relevant elements of the student proposals in their company's marketing strategies and plans.

Data Collection and Analysis

Graduate students enrolled in the three marketing courses, namely (1) Customer Centric Innovation; (2) New Product Development and (3) Contemporary Issues in International Marketing, being taught by the same professor, was asked to take part in this study. Of the 86 total students, 33 students completed the survey, resulting in a 38.4% response rate.

Instrument

The survey questionnaire was developed based on work of Parsons and Lepkowska-White (2009) and consisted of 19 items across four scales: Student Motivation to Learn, Project as a Learning Device, Skills, and Personal Benefits, and Overall 'Real Company Project' Assessment. The Student Motivation to Learn scale consisted of four items, with internal consistency reliability of .59. Because of a below acceptable item-total correlation (.05) (Field, 2013), the item "I prefer this to an all lecture course" was dropped from the scale. The resulting three-item scale had internal consistency reliability of 0.81. The Project as a Learning Device scale was comprised of 4-items and had internal consistency reliability of 0.95. The Skills and Personal Benefits scale had internal consistency reliability of 0.91 and consisted of 7-items. The Overall 'Real Company Project' Assessment scale had 5-items, with internal consistency reliability of 0.94.

Study Procedure

Students enrolled in the three graduate marketing courses were emailed an invitation to take part in the study by completing a survey created in Qualtrics. The email detailed the purpose of the research and sought their participation in both the study and the survey that followed the project. Students were repeatedly assured of the anonymity of their responses, and effort was made in letting them know that their feedback had no bearing on their overall grade determination. The data was collected after completion of both courses (at the end of two semesters) to solicit honest responses. Students were told the primary purpose of the survey-based feedback on the "Real Company Project" was to promote and strengthen future course content and offerings. As a token of appreciation, students who completed the survey were entered into a random drawing for a chance to win a \$25 iTunes gift card. Besides the first email message, two reminder emails were sent to students, with each request sent a week apart.

Results

Participants rated their agreement with each item on a scale from Strongly Disagree (1) to Strongly Agree (5), with Neither Agree nor Disagree (3) as the midpoint. One-sample t-test results revealed the mean rating for each item was significantly higher than the midpoint of “Neither Agree or Disagree” ($p < .01$). Across the 19 items, five had mean ratings less than four, with the rest having mean ratings greater than four. Table 1 shows the mean and standard deviation for each item.

The Student Motivation to Learn scale resulted in a mean score of 4.32. Most students agreed or strongly agreed that the project improved engagement with the course content (82.4%) and made discussions in class more enjoyable (93.9%). There was widespread consensus in recognizing the project was well worth the time spent on it (93.8%).

The Project as a Learning Device scale received the highest mean score ($M = 4.45$). Ninety-seven percent of students agreed or strongly agreed with the use of a “Real Life Project” as a learning method. They said the project made the subject matter realistic, integrated and illustrated concepts in the course better. Also, most students pointed out the project helped them remember the course material better (90.1%).

The seven items comprising the Skills and Personal Benefits scale resulted in a mean score of 3.98. There was an agreement in recognizing the project helped develop teamwork and report preparation skills (75.8% and 81.8%, respectively). Responses varied in agreement that the project improved their secondary data search skill set (understanding of how to get information from the library and online databases or websites), and their skill in conducting a SWOT analysis, with 54.5% and 75.8%, respectively, agreeing or strongly agreeing. However, most students agreed or strongly agreed that their understanding of how to write a business report of findings improved (87.9%). Students had the most substantial agreement that they advanced in their knowledge of how to analyze the overall dynamics in a product category and how to analyze the competition (93.8% and 90.1%, respectively).

The final scale was the Overall ‘Real Company Project’ Assessment consisting of five items resulting in a mean score of 4.28. Most students said the project made the overall course more engaging and that it provided them with the confidence and ability to solve a real-world problem (97% and 87.9%, respectively). Almost three-fourths (72.7%) of the respondents agreed or strongly agreed with the statement that the project would improve their job performance. Overall, students agreed or strongly agreed the project was and would be helpful in other business courses (93.9%) and recommended that the project continues as a course requirement (97.0%).

Table 2 and 3 provides the means, standard deviation for each item for each semester. Table 4 provides a comparison of means and standard deviation for each course and also offer t-value and p – values.

Table 1 – “Real Company Project” Questionnaire Results

Item	M	SD
<i>Student Motivation to Learn</i>		
This project enhanced my engagement with the course content.	4.24	1.06
This project made discussions in class more enjoyable.	4.30	0.81
This project was worth the time spent on it.	4.34	0.83
<i>Project as Learning Device</i>		

This project made the subject matter realistic.	4.64	0.78
This project integrated concepts in the course.	4.42	0.79
This project illustrated concepts in the course.	4.33	0.78
This project will help me remember the material better.	4.42	0.87
<i>Skills and Personal Benefits</i>		
This project helped me develop my teamwork skills.	3.87	0.87
This project helped my report preparation skills.	3.97	0.81
My understanding of how to obtain information from the library and online databases or websites improved.	3.55	0.91
My understanding of how to write a business report of my findings improved.	4.03	0.73
My understanding of how to conduct a SWOT analysis improved.	3.97	0.95
My understanding of how to analyze the overall dynamics in a product category improved.	4.31	0.69
My understanding of how to analyze the competition in a category improved.	4.19	0.78
<i>Overall 'Real Company Project' Assessment</i>		
This project made the overall course more engaging.	4.58	0.79
This project provided me with the confidence and ability to solve the real-world issue.	4.21	0.93
This project was and will enhance my job performance.	3.97	0.98
This project was and will be helpful in my other business courses.	4.18	0.77
I would recommend that this course continues to require this project.	4.48	0.80

Table 2 - 1st Semester Courses – New Product Development/Customer Centric Innovation

Item	M	SD
<i>Student Motivation to Learn</i>		
This project enhanced my engagement with the course content.	4.00	1.41
This project made discussions in class more enjoyable.	4.25	0.46
This project was worth the time spent on it.	4.29	0.49
<i>Project as Learning Device</i>		
This project made the subject matter realistic.	4.86	0.38
This project integrated concepts in the course.	4.57	0.54
This project illustrated concepts in the course.	4.57	0.54
This project will help me remember the material better.	4.43	0.54
<i>Skills and Personal Benefits</i>		
This project helped me develop my teamwork skills.	4.00	0.58
This project helped my report preparation skills.	3.86	0.38
My understanding of how to obtain information from the library and online databases or websites improved.	3.57	0.54
My understanding of how to write a business report of my findings improved.	4.29	0.49
My understanding of how to conduct a SWOT analysis improved.	3.57	0.54

My understanding of how to analyze the overall dynamics in a product category improved.	4.57	0.54
My understanding of how to analyze the competition in a category improved.	4.14	0.38
<i>Overall 'Real Company Project' Assessment</i>		
This project made the overall course more engaging.	4.86	0.38
This project provided me with the confidence and ability to solve the real-world issue.	4.29	0.49
This project was and will enhance my job performance.	4.14	0.38
This project was and will be helpful in my other business courses.	4.14	0.38
I would recommend that this course continues to require this project.	4.71	0.49

Table 3 - 2nd Semester Course – Contemporary Issues in International Marketing

Item	M	SD
<i>Student Motivation to Learn</i>		
This project enhanced my engagement with the course content.	4.33	0.96
This project made discussions in class more enjoyable.	4.32	0.90
This project was worth the time spent on it.	4.33	0.92
<i>Project as Learning Device</i>		
This project made the subject matter realistic.	4.56	0.87
This project integrated concepts in the course.	4.40	0.87
This project illustrated concepts in the course.	4.28	0.84
This project will help me remember the material better.	4.48	0.92
<i>Skills and Personal Benefits</i>		
This project helped me develop my teamwork skills.	3.83	0.96
This project helped my report preparation skills.	4.00	0.91
My understanding of how to obtain information from the library and online databases or websites improved.	3.52	1.01
My understanding of how to write a business report of my findings improved.	3.96	0.79
My understanding of how to conduct a SWOT analysis improved.	4.04	1.02
My understanding of how to analyze the overall dynamics in a product category improved.	4.21	0.72
My understanding of how to analyze the competition in a category improved.	4.17	0.87
<i>Overall 'Real Company Project' Assessment</i>		
This project made the overall course more engaging.	4.48	0.87
This project provided me with the confidence and ability to solve the real-world issue.	4.20	1.04
This project was and will enhance my job performance.	3.92	1.12
This project was and will be helpful in my other business courses.	4.20	0.87
I would recommend that this course continues to require this project.	4.40	0.87

Table 4 - Comparison of 1st and 2nd Semester Courses

Item	1st Semester Courses		2nd Semester Course		t-value	p-value
	M	SD	M	SD		
Student Motivation to Learn						
This project enhanced my engagement with the course content.	4.00	1.41	4.33	.96	-.752	.458
This project made discussions in class more enjoyable.	4.25	.46	4.32	.90	-.210	.835
This project was worth the time spent on it.	4.29	.49	4.33	.92	-.131	.897
Project as Learning Device						
This project made the subject matter realistic.	4.86	.38	4.56	.87	.873	.390
This project integrated concepts in the course.	4.57	.53	4.40	.87	.495	.625
This project illustrated concepts in the course.	4.57	.53	4.28	.84	.862	.396
This project will help me remember the material better.	4.43	.53	4.48	.92	-.141	.889
Skills and Personal Benefits						
This project helped me develop my teamwork skills.	4.00	.58	3.83	.96	.433	.669
This project helped my report preparation skills.	3.86	.38	4.00	.91	-.401	.692
My understanding of how to obtain information from the library and online databases or websites improved.	3.57	.53	3.52	1.00	.129	.898
My understanding of how to write a business report of my findings improved.	4.29	.49	3.96	.79	1.031	.311
My understanding of how to conduct a SWOT analysis improved.	3.57	.53	4.04	1.02	1.162	.254
My understanding of how to analyze the overall dynamics in a product category improved.	4.57	.53	4.21	.72	1.231	.228
My understanding of how to analyze the competition in a category improved.	4.14	.38	4.17	.87	-.070	.945
Overall 'Real Company Project' Assessment						
This project made the overall course more engaging.	4.86	.38	4.48	.87	1.105	.278
This project provided me with the confidence and ability to solve the real-world issue.	4.29	.49	4.20	1.04	.210	.835
This project was and will enhance my job performance.	4.14	.38	3.92	1.12	.841	.407
This project was and will be helpful in my other business courses.	4.14	.38	4.20	.87	-.169	.867
I would recommend that this course continue to require this project.	4.71	.49	4.40	.87	.913	.368

Student Motivation to Learn

This section of the survey involved three questions designed to ascertain the student's motivation to learn. The first question "This project enhanced my engagement with the course content" resulted in a mean rating of 4 for the 1st semester and 4.33 for the 2nd semester. The second question "This project made discussions in class more enjoyable," achieved a mean rating of 4.25 in the 1st semester and 4.32 in the 2nd semester. The third question in this section, "This project was worth the time spent on it," resulted in a mean rating of 4.29 in the 1st semester and 4.33 2nd semester. The overall comparison shows the mean values from the 1st semester to the 2nd semester increased for all questions in this section.

Project as Learning Device

The next four questions on the survey were designed to measure student perceptions of the real-world project as a learning device. Student responses varied considerably among the four questions. "This project made the subject matter realistic" received a mean rating of 4.86 and 4.56 from the 1st and 2nd semester respectively. The mean rating for "This project integrated concepts in the course" were 4.57 for 1st semester and 4.40 for 2nd semester. "This project illustrated concepts in the course" achieved a mean rating of 4.57 in the 1st semester and 4.28 in the 2nd semester. "This project will help me remember the material better" resulted in a mean rating of 4.43 in the 1st semester and 4.48 in the 2nd semester. The overall comparison indicates the mean value for only one item increased between the first and second semester while means for the remaining three items decreased. We believe the declining means for the realistic subject matter, integrating course concepts, and illustrating concepts could well be a function of student fatigue. The fatigue could be because the novelty of the project wore off by the 2nd semester. The repetitive reminders by the instructor to think holistically and to incorporate and integrate elements of all previous coursework led to a high mean value in the first semester but was not perceived as yielding incremental value by the end of the second semester.

Skills and Personal Benefits

The seven items comprising the Skills and Personal Benefits scale resulted in a mean score increasing for three items from the 1st to 2nd semesters while scores for four items decreased. Respondents pointed out that their report preparation skills, conducting SWOT analysis and analyzing competition skills were increased between the two semesters. Teamwork, getting information from online and library databases, reporting the findings and analyzing the overall dynamics in a product category decreased from one to the other semester. The overall comparison did not show any particular characteristic.

Overall 'Real Company Project' Assessment

The final scale was Overall 'Real Company Project' Assessment and consisted of five items. The project made the overall course more engaging and provided me with the confidence and ability to solve real-world issues saw a decrease in mean scores from 1st to 2nd semester. Similarly, "this project was and will enhance my job performance" and "I would recommend that this course continues to require this project" also saw a decrease in mean values from 1st to 2nd semester.

However, “this project was and will be helpful in my other business courses” saw an increase. A comparison of the same is shown in Table 4.

Discussion

The data and the analysis in the preceding table show that students have a positive perception of the learning associated with real-company projects. This research study replicates and confirms the findings of earlier researchers examining student perceptions of experiential learning.

The results of this project conform to the findings of Benigni, Cheng, and Cameron (2003) who found that client involvement led to more active course outcomes. Question: Most students agreed or strongly agreed to “*this project improved my engagement with the course content*” (82.4%); Question: “*This project made discussions in class more enjoyable*” (93.9%); Question: “*This project was worth the time spent on it.*” Overwhelmingly students agreed or strongly agreed the project was worth the time spent on it (93.8%); Question: “*This project made the overall course more engaging*” Most students said the project made the overall course more engaging (97%).

Ninety-seven percent of students agreed or strongly agreed “*the project made the subject matter realistic*” and “*This project integrated and illustrated concepts in the course*”; and most students articulated the experiential project helped them retain the course material better (90.1%). In a research study conducted by de los Santos and Jensen (1985), it was found that if the course content with a client-based project seems more like what would be seen in the real-world, students are more interested in learning.

When students were asked to comment on “*This project helped my report preparation skills*” there was an agreement of 81.8%. Also, most students agreed or strongly agreed that their “*understanding of how to write a business report of findings improved*” (87.9%). Students also mentioned, “*This project helped me develop my teamwork skills*” (75.8%). Both these student perceptions support the research done by Wickliff (1997) in which a survey of alumni with two to seven years of postgraduate work experience suggested the alumni felt that client-based projects helped them to develop reporting, research, problem analysis, and small group collaboration skills.

Further, there was consistency in the findings associated with student’s involvement/interest in the project if they perceived the same as being relevant to their careers. Razzouk, Seitz, & Rizkallah (2003) study points out that students interests in a project increase if they perceive it as being relevant to their careers. When students in this study were asked the same question - “*This project was and will enhance my job performance,*” they responded with 72.7 % agreement.

Conclusions

The results of this study explore the use of experiential projects across curricula in graduate marketing courses is consistent with the extant literature in business education. The study confirms that experiential learning improves student’s learning and the ability to apply concepts holistically to solution-driven decisions as needed by marketing managers. Students gain the much-needed practical experience necessary to “hit the road running” to succeed in their jobs. This is instrumental in closing the gap between a theoretical grasp of the content area and the application of the same in a real-world context. Further, there are significant managerial/practical implications of collaborating with student groups. The key benefits include a fresh perspective on a business problem/situation, a low-cost alternative to addressing a business concern, early identification of potential hires, and informing academia of skills/competency needs.

Incorporating experiential learning into the curriculum also has the tangential benefit of fulfilling the current accreditation requirements. AACSB accreditation criteria articulate the need for innovation in teaching courses in a manner that engages businesses, and the communities served. Experiential projects that involve local businesses have the dual benefit of providing local enterprises with an outsider's perspective while giving the student body with compelling real-world experience. While this study points to the efficacy of experiential learning, it must be recognized that this study over two courses has not been examined thoroughly and bears replication across a divergent student and institutional context. The sample size was limited and as stated the study was limited to a single institution in the Caribbean. Further, future researchers would be well served in isolating the experimental effect by incorporating some variety to address the issue of student fatigue. Collaborating with colleagues across the curriculum can enhance the exploration of this topic and minimize student fatigue.

This paper adds to the existing wealth of knowledge on the value of experiential learning activities in business education, in general, and graduate marketing courses in particular. Specifically, the study explores the inclusion of an integrative experiential learning experience over multiple courses. The study confirms the positive contributions to student learning at undergraduate level using experiential learning projects is similarly perceived by these graduate students, offering the opportunity for continued research in this area. The conclusions of this study and the analysis of empirical data related to 'student motivation to learn', students perceptions of 'experiential learning projects as a learning device', 'skills and personal benefits' to students, and 'overall real company project assessment' by the students should encourage many faculty members teaching graduate marketing courses to consider the use of this method. Based on these results, adding an experiential learning project across the curriculum will improve student learning and satisfaction, as well as better prepare students for the 'world of work' to apply the conceptual knowledge gained in their graduate marketing courses to real-world situations

Experiential projects provide students an excellent opportunity to learn by doing. However, these experiential projects may not be right for every course or instructor. Like Fitch (2011) said, assumptions cannot be made about the value of experiential projects. He suggested that learning activities need to be carefully structured to link academic learning and professional development.

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Decoding Deviance with the *Sons of Anarchy*

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*Abstract: This article explicates the ways that the popular television series *Sons of Anarchy* in conjunction with our content analysis coding tool can be used to teach theories and concepts central to Sociology of Deviance courses. We detail how students learned to understand deviance as a social constructed phenomenon by coding and analyzing the behaviors of their most liked and most hated *Sons* characters. Evidence extrapolated from students' final projects, class discussions, and course evaluations suggests that this pedagogical technique creates a systematic teaching method enabling students to more actively engage in the course while enhancing connections to the course materials.*

Keywords: deviance, social construction of deviance, popular culture, content analysis

Using television and film as a pedagogical tool in sociology is far from a new phenomenon. Scholars have attested to the fact that using television and film helps bring to life abstract sociological theories and concepts, helps to better engage students with course materials, and as a result stimulate their sociological imaginations (Burton, 1988; Champoux, 1997; Demerath III, 1981; Donaghy, 2000; Eaton & Uskul, 2004; Hannon & Marullo, 1988; Hutton & Mak, 2014; Khanna & Harris, 2015; Livingston, 2004; Loewen, 1991; Melander & Wortmann, 2011; Nefes, 2014; Trier, 2010; Wosner & Boyns, 2013). For example, when speaking to the benefits of using the cinema as a teaching tool Champoux (1999) states: "viewers are not passive observers. Their responses add to the power of film. Cinema's ability to create unique experiences gives it unbeatable power as a teaching tool" (p. 207). Wosner and Boyns (2013) also speak to the idea that television shows and film create a "willing suspension of disbelief" whereby the stories and characters lead viewers into "sociological universes that are beyond the realm of conventional experience, but at the same time, provide a...reality that illuminates sociological themes present in our social world" (p. 213). Moreover, students are also already used to receiving much information about the social world from the media including television, films, and the internet. Thus, their comfort with these media enhances the likelihood of being able to relate to and empathize with characters, therefore, more easily opening the door for sociological analysis.

In light of these findings, the main purpose of this article is to demonstrate how the show *Sons of Anarchy* combined with a content analysis coding tool has great pedagogical potential for academics teaching the sociology of deviance. In the following sections we first outline how we incorporated *Sons of Anarchy* as a required "text" (Trier, 2010) for teaching deviance and detail the logistics of how the coding tool and show were integrated into the course. In all, the benefits of this pedagogical approach include: enhanced connections to course materials and readings,

more critically informed class discussions, and an avenue for conducting a systematic analysis of deviance in popular culture derived from student compiled data.

Subsequently, we provide evidence to demonstrate the effectiveness of this pedagogical approach on student learning. As it is beyond the scope of this paper to include all evidence of student learning we focus specifically on how students learned to understand deviance as a socially constructed phenomenon by coding and analyzing the behaviors of their most liked and most hated *Sons* characters. We chose to focus on the social construction of deviance because it is foundational to any sociology of deviance course and is typically the first topic that students encounter in such classes. Furthermore, evidence is presented detailing students' overall evaluation of the course. Lastly, we speak to how this approach can be tailored to other courses that span various sub-disciplines within sociology.

Literature Review

Why Sons of Anarchy?

Sons of Anarchy is an American crime drama that aired seven seasons on FX from 2008-2014. The show is set in the fictional Northern California town of Charming and follows a fictional, tight-knit, outlaw motor-cycle club (mirrored after the real Hells Angels) known as the Sons of Anarchy Motorcycle Club, Redwood Original (SAMCRO) (O'Hare, 2008). The show's primary focal point and protagonist is Vice President, Jackson Teller (aka Jax), and his on-going struggle to find purpose and meaning amongst the chaos that naturally befalls someone dedicated to a life straddling the worlds of both conformity and deviancy. He, unlike most of the other central *Sons* members, is also burdened with the knowledge of his father's (John Teller's) manifesto that details why the club was originally formed and what it initially stood for. This knowledge eventually leads to an ongoing conflict between Jax and his step-father (the only father he has ever really known) and club President Clarence Morrow (aka Clay) due to their diverging views on how the club should operate. This tension also leads to ongoing deception and frustration on the part of the two lead female characters, Gemma Teller-Morrow (Jax's mother and Clay's "Old Lady") and Tara Knowles (Jax's girlfriend). While technically not allowed to be in the club, each have great influence over the two central male leaders—Clay and Jax.

We believe that *Sons of Anarchy* (much like that of HBO's *The Wire* which has been used to help students better understand urban inequality and crime) is an ideal platform to help students learn about the sociology of deviance given the true-to-life world that Kurt Sutter, the master mind behind the show, has managed to create. In order to make the show as genuine as possible Sutter immersed himself in the academic literature on one-percent motorcycle clubs and also became a participant observer in a chapter of the Hells Angels. Although the term "one-percent" has no official definition and can represent a variety of motorcycle clubs, it was originally embraced as a mark of distinction by the Hells Angels following a claim by the American Motorcycle Association (A.M.A.) that "outlaw clubs were typical of only one-percent of the American motorcycling population" (Quinn, 2001, p. 380). In an interview with Kurutz (2009) of *The Wall Street Journal*, Sutter speaks to what surprised him most about his time with the Hells Angels: "I went up to Northern California and spent quite a bit of time with these guys in an outlaw club. Like most people, I had a preconceived notion of bikers being hard a—s or teddy bears on Harleys. I was moved by the sense of loyalty. Brotherhood to the club had

precedent over everything: personal lives, the community, the laws of the land. Everything else fell behind” (para. 3).

Sutter, who himself plays a *Sons* member (Otto Delaney) in the show, also regularly consulted with the Hells Angels during production to ensure the show's authenticity. Moreover, he even cast several Hells Angels in the show. In addition to the fact that Sutter created a world that is reflective of the scholarly literature on one-percent motorcycle clubs, we also chose *Sons of Anarchy* because of the breadth and depth of deviant activities that are portrayed (e.g., murder, rape, robbery, aggravated assault, prostitution, pornography, infidelity, blackmail) as well as the combination of individuals from differing statuses/positions of power (e.g., local law enforcement, federal law enforcement, politicians, businessmen, international gangs) whose behavior can be analyzed. Individuals from each of these groups straddle the worlds of deviance and conformity thus blurring the lines between “good and evil” or “right and wrong”. Through these various characters and their relationships we encounter an ongoing struggle that both the characters and the audience find themselves in when it comes to defining who and what is deviant.

The Social Construction of Deviance

When we hear the word “deviance” we often think about people that are “bad” or “mad” or acts that are “bad” or harmful to society. Nevertheless, this is far from the reality of what deviance in fact encompasses. It was Durkheim (1897) who long ago recognized deviance as a social construction stating, “that we do not condemn it [behaviors/acts] because it is a crime, but it is a crime because we condemn it” (p. 163). In other words, he argued that certain acts/behaviors are considered deviant only when society collectively constructs/defines them to be so, as opposed to acts/behaviors being deviant because they are somehow inherently bad or evil in and of themselves. Durkheim also recognized that deviance provides useful functions to society, primarily, social cohesion and progressive social change.

This conception of deviance has led more contemporary scholars to define deviance in various different ways. Some scholars assert that deviance is simply the violation of social norms (i.e., social rules of behavior) (Clinard & Meier, 2008), while others claim that an act must be met with some form of social disapproval in order to be classified as deviant (Goode, 2011). Others agree with Durkheim in terms of the positive functions of deviance and go as far as to assert that deviance can be positive, heroic, and represent a source of beneficial social change (Wolf & Zuckerman, 2012; Wosner & Boyns, 2013). These scholars point to “moral crusaders” such as Rosa Parks, Martin Luther King, Malcom X, Ghandi and Harvey Milk as positive deviants because they fought against injustice and inequality by rebelling against the laws to bring about social change. Many would also label iconic fictional characters like Robinhood and Batman as positive deviants because they take the law into their own hands to fight corruption and evil when systems of formal social control fail to do so. Others consider these “positive” deviants to be nothing more than an oxymoron (Heckert & Heckert, 2002).

Regardless of definition, however, scholars do agree that the nature of deviance itself is much broader than that of crime (i.e., violations of the law) with the number and types of deviant acts far exceeding the number and types of crimes. Deviance encompasses criminal acts but also a variety of things that might be considered amoral (e.g., pre-marital sex, abortion) or just rub people the wrong way (e.g., people chewing with their mouths open, people wearing sandals with socks). Most also agree that what is considered deviant depends upon social and cultural

context. Thus, what one might consider deviant at one time, place, and under certain circumstances will not be defined as deviant at another time and place and under different circumstances.

Methods

How to Use Sons of Anarchy and the Content Analysis Coding Tool in the Sociology of Deviance

Prior to the data collection we obtained IRB confirmation that this research is exempt from human subjects requirements because of the educational nature of the project. Given that we incorporate evidence in the results section from students' coursework, all students were assigned pseudonyms to ensure confidentiality. It should also be noted that students were informed of their right to not have their work used in any publication that could result from the study and that withholding their work would not unduly affect their grade. No students objected to having their work utilized in this study.

At the beginning of the semester all students were notified of the use of *Sons of Anarchy* as a required "text" (Trier, 2010) in the course and were given the syllabus which outlined the specific topics that would be covered. In addition to the foundational sections that cover defining and researching deviance, as well as theories of deviance we chose the following topical areas: violent crime, hate crimes, sexual deviance (e.g., pornography, exotic dancing, and prostitution), substance use and abuse, and deviant identities. While these areas are standard in most deviance courses, we focused primarily on how these topics manifested themselves in the show and then compared them to society more generally. Students were also required to read several empirical articles on one-percent motorcycle gangs and pseudo-bikers (see Barker & Human, 2009; Quinn & Forsyth, 2009; Quinn & Koch, 2010; Thompson, 2008). Beyond this, we included readings on street gangs for comparative purposes, as well as a lecture on Goffman's (1959) presentation of self that led to a discussion on deviant identity formation.

This study was conducted during a six-week summer 2015 session where classes are required to meet for 75 minutes, five days a week, for six weeks at a large public University in the Pacific Northwest. The class was an undergraduate upper-division elective comprised of 10 students (four male/six female; three white/seven non-white) majoring in sociology, criminal justice, psychology, and human development. The course was co-taught by the authors and structured in seminar fashion where Mondays, Wednesdays, and Fridays served as the lecture/discussion days while Tuesdays, Thursdays, and weekends were designated for students to watch, code, and read independently. This set up was created to ensure that students had adequate time to watch and code two episodes every other day for a total of 26 *Sons* episodes. It was specified on the syllabus and stated in class that a Netflix subscription (or the purchase/rental of DVDs) was needed if they did not have access to the show already. A one-month subscription to Netflix costs approximately \$10. In all, only one student did not already have access to the show so this proved not to be an issue. Assessment of student learning was based upon the following elements: 1) attendance and participation, 2) the watching and coding of the 26 episodes, 3) weekly quizzes on the readings, lectures, and the show and, 4) a final project. Each of these elements was worth approximately 25 percent of the student's final grade.

In preparation for the course the authors viewed seasons one through six of *Sons of Anarchy* and developed a content analysis coding tool (see Appendix A) to help students critically analyze the characters and events in the show. Using this tool, students and both

authors independently watched and coded the entire first two seasons of the show over the course of the six week semester. Students were required to code for the types of criminal/deviant activities and other contextual details surrounding the acts including: time, day, location, number of victims, weapons used, relationships between victim(s) and offender(s), as well as offender motive which was to be tied back to theories of deviance. In addition to these codes, students were also asked to consider whether they viewed the behaviors as deviant given the situational context and to assess the characters' presentation of self. Moreover, all students were required to specify how the course readings for that week, approximately three to five scholarly articles, applied to the episodes watched.

At the end of the first week we paired students together so that they could compare their coding with a partner. Additionally, we made copies of our own coding sheets and shared them with the students following the class discussion that day. This enabled students to assess the accuracy of their initial coding sheets and also served as an example of the level of detail needed to successfully complete the final project. The students' coding sheets were subsequently collected once a week by the authors and graded for accuracy and thoroughness. Copies were made by the authors to better gauge the students' learning over the course of the semester. Original coding sheets were then returned to the students for discussion purposes and so that they could be used for analysis in completing their final projects (see Appendix B). The first several of rounds of coding that the students turned in were less detailed given that they had yet to develop the knowledge base to make the necessary critical connections being asked of them. As the weeks passed on, however, the coding sheets became more thorough and detailed thus better reflecting the depth of students' learning.

The first part of the final project in the course required students to analyze their own data in order to answer the following questions: Who is your most liked and most hated character and why? What are the three most deviant and/or criminal behaviors that these characters were involved in? Why are these behaviors defined as deviant by society? Are they defined as deviant by the persons engaged in those behaviors? Why did they commit these deviant acts (what were their motives)? How do these motives relate to theories we have discussed in class? How did these characters manage their deviant (or perhaps not so deviant) identities? How did they appear and act in the front vs. the back stage? Did their presentation of self change at all over the first two seasons? Overall how did watching and coding *Sons of Anarchy* help you to understand and critically think about deviance? The second part of the final project required students to create a digital poster of either their most liked or most hated character. These posters were to be a visual character summary and provide insight as to why the character was their most liked or most hated.

For the purposes of this paper we have chosen to narrow down our evaluation of students' learning to how they came to understand deviance as a social construction. Additionally, we incorporate students' general feedback on usefulness of *Sons of Anarchy* combined with the content analysis coding tool as an effective teaching technique in the course. The data presented below are qualitative in nature and are drawn directly from students' final projects, class discussions, and course evaluations. We have chosen to present data in this manner given the small class size (N=10) which inhibits the inclusion of robust quantitative measures.

Results

Decoding the Social Construction of Deviance in Sons of Anarchy

We have elicited several events from the show that exhibited students' abilities to understand that social and cultural context is paramount in deciding whether an act is considered deviant or not. Generally speaking, the consensus among students was that acts committed by people in positions of power and status to preserve their power and status, no matter the severity, were often viewed as deviant. On the other hand, acts committed for the good of many or the "greater good", no matter the severity, were not viewed as deviant. This often meant that acts that either explicitly or implicitly hurt club solidarity, the sense of family, or the club's survival were often interpreted as deviant. Alternatively, acts that strengthened solidarity, club survival, and sense of community were often interpreted as non-deviant.

One of the characters unanimously classified by students as deviant in class discussions and in assignments was Alcohol, Tobacco, and Firearms (ATF) Agent June Stahl. Agent Stahl wanted the personal satisfaction and professional glory of being the only one tough enough take down the *Sons of Anarchy* which ultimately led her to adopt an "anything goes" mentality. This mentality led to what students considered one of the most deviant acts of the first two seasons of the show: the framing of Opie Winston (Jax's best friend from childhood and loyal club member) as a snitch. Agent Stahl was well aware that her actions could lead to Opie's untimely death, however, she had no qualms about setting him up anyway. In the end, another club member was tasked with murdering Opie yet it was Opie's wife who was mistakenly killed. It was actions like these that lead some students to nominate Agent Stahl as their most hated character. As Kenneth states in his final project "Stahl is my most hated character because she abuses her power as a federal agent for her own personal goals to become successful." In their final projects others agreed with this:

Stahl is my most hated character because throughout the whole series she manipulates people for her own benefit, no matter the cost. I believe that the acts she partakes in are far more deviant than the ones of [my favorite] character Jax...Jax was always trying to find a solution to helping the club in a positive way, while Stahl would do anything, moral or not, just as long as she would be on top at the end... Her main concern is failing to meet her goals so she does anything in her power to achieve them (Ethan).

Agent Stahl is my most hated character because she is manipulative, conniving, heartless, mean spirited and overall a bad person. I do view her as deviant because even though most of her deviancy is not technically against the law she is only ever thinking about herself and never seems to be worried about the wellbeing or lives of others around her as she abuses her legal power. And to me this is far more deviant than some of the crimes that Jax and other SAMCRO members commit (Kristy).

The behavior of Gemma (Jax's mother/Clay's wife) is not so cut and dried as that of Agent Stahl. During in class discussions students had a more difficult time defining her behaviors as deviant. Gemma stood out as a character that, much like Stahl, was deceptively

deviant though this deviance was masked behind the cover of a protective mother who would go to great lengths to protect her family and ensure the club's survival—hence the struggle to define her as deviant. In fact, on several occasions Gemma stated something to the effect that “nothing gets in the way of me taking care of my family, especially my conscience.” Even after acknowledging her lying and manipulative ways, students couldn't quite define Gemma as a deviant because the intentions behind her behaviors were “good.” Savannah, Nicole and Pamela speak to this in their final projects:

Making a choice on my most liked and most hated character from the drama was hard. I think the reason that Gemma is my favorite is because of her perspective on family. I personally see family as my most important thing in life and I too would do whatever it takes to protect them (Savannah).

Gemma was my favorite character in the show because she never took shit from anyone. I liked that despite her manipulative and aggressive nature, she continued to support her family. Family was her main priority and that is something that I can relate to. I found her deviant but I felt the reasons behind her actions were valid so I was always rooting for her (Nicole).

Gemma is my favorite character in the show so far. She has been able to get things done using manipulation, yet there is also a motherly side of her that makes it difficult for you not to like her. There are times when she is overbearing, especially when it concerns Jax, but you can tell that she cares a lot about the club and the members. Despite all the deviant acts that she committed, whether it was cheating, assaulting someone, or using deception to get her way, you see that she is important to the club. Thus, I do not define her as deviant (Pamela).

Arguably, many students found Gemma's fierce “mama bear” mentality to be a noble pursuit even through her lack of conscience resulted in the same “anything goes mentality” utilized by Stahl. The students downplayed Gemma's behavior, however, because she was “acting in the best interests of her family and the club” as opposed to Stahl who was acting in the best interests of herself. Interestingly, while students struggled with defining Gemma as deviant, they had no difficulty pointing the finger at Clay. Clay, unlike Gemma, could not hide behind the caring, motherly, good-intentioned cover and was often found to be in open opposition to Jax (a favorite for some and definitely a second favorite for most) who was seen as trying to make the club better by steering them back to a more simple, unadulterated time. In their final projects Jacob and Pamela speak to their dislike of Clay for this very reason:

Clay is my most hated character...He is all about making money and having power...he lies, cheats, and uses his position in the club to make everybody else do what he wants. It's all about his end game (Jacob).

Clay is a character I have grown to really dislike. He has made some really unwise decisions for the club that just complicated things more. I also find him deviant because he is a hypocrite. He promotes brotherhood, yet doesn't do a great job of protecting his

brothers and all of his careless mistakes just made me worry for Jax and the rest of the club (Pamela).

When it came to defining the behaviors of Jax and the club more generally as deviant, students in class discussions often reverted to pointing out that many of their actions would fall under the umbrella of positive deviance, and therefore, were not deviant in the “bad” sense of the word. Even though the club was engaged in both illegitimate (e.g., gun running, money laundering) and legitimate (though perhaps deviant) enterprises (e.g., auto repair, pornography production) much of their time was also spent acting as the primary protectors of Charming. This role entailed making sure to rid the community of any evils that not only undermined or put in jeopardy their lives, the lives of their families and/or their livelihoods, but also those evils that hurt the community as a whole. Often times this meant engaging in deviancy in order to prevent or control “worse” or more “reprehensible” deviancy.

One primary example of positive deviance discussed early in the class was the murder of ATF Agent Josh Kohn. Agent Kohn was one of the first characters to be vilified by the students who were quick to label him as a “creeper” for his unhealthy infatuation with Tara. While he and Tara were once romantically involved, the relationship ended when Agent Kohn became overly obsessive and controlling causing Tara to flee back to her hometown of Charming. It was in his quest to find Tara that Agent Kohn uncovers her connection to the *Sons of Anarchy* and learns of her rekindled relationship with Jax. Eventually, Agent Kohn confronts Tara and during an attempted rape is non-fatally shot as she was defending herself. Jax is then called in to finish the job.

Students viewed the murder of Agent Kohn by Jax as not deviant given that Jax was the only one willing to do what was necessary to protect her. When talking about this incident in her final project Mileah states that, “Jax killing Tara’s stalker was not deviant, nobody was doing anything to protect her.” Kristy and Ethan reiterate this point in their final projects when they state:

Jax is not deviant, he’s just protecting Tara in the long run, doing what others wouldn’t. The system [criminal justice system] can only do so much (Kristy).

Society looks at murder as a deviant act, however, in this context I do not consider it deviant due to the fact the he was protecting the one who he loves....Agent Kohn was using his power as a federal agent to get around a restraining order as a means to get closer to Tara. The criminal justice system was not working for her in this situation (Ethan).

Beyond this, there are various other acts of vigilante justice committed by the *Sons of Anarchy* throughout the first two seasons that students defined as positive/heroic. Those discussed most often in class included: 1) the castrating of a carnival worker who raped a local teenage girl, 2) the murder of several white supremacists who gang raped Gemma and, 3) the murder of several Irish Republican Army (IRA) members who kidnapped Abel, Jax’s infant son. Ultimately, this weeding out of deviants in service to themselves and to the Charming community was viewed by students as something that needed to be done and that in many ways could only be done by the club. In all, it is clear to us that the evidence presented here

demonstrates students' understanding that defining who or what is deviant is dependent upon social and cultural context.

Overall Evaluation of Using Sons of Anarchy and the Content Analysis Coding Tool in the Sociology of Deviance

When asked in their final projects to reflect upon the usefulness of watching and coding *Sons of Anarchy* in helping them to better understand the concepts and theories presented throughout the course most, if not all, students had positive things to say. Here are a few student responses:

Watching *Sons of Anarchy* throughout the semester really benefitted my learning. It made it a lot easier for me to understand how sociological theories of deviance can be applied to real life situations. It also helped me to understand how all these theories intertwine and play off one another (Nicole).

Sons of Anarchy helped my understanding of deviance in a great way. It shows perfectly that not all deviant acts are bad. Or that the things that happen in the show may be against the social norms but to them [the club] are not deviant but are everyday tasks (Ethan).

Sons of Anarchy immensely helped me to think critically about deviance. By seeing different situations play out in the show I was able to understand that just because something may not be murder or against the law, it can still be seen as deviant to some...Through content analysis, watching the show, and recording observations, I was able to recognize patterns and identify situational deviance much easier than by simply reading about it. I thoroughly enjoyed this class and its innovative way to learn the material (Kristy).

At first, I was not interested in the show and found it a chore to watch. However, as the episodes progressed, I was drawn in. Watching *Sons of Anarchy* better helped me to understand the course material because it gave me the chance to observe and apply what I learned...Overall, the show was an excellent tool in helping me to understand and apply course concepts (Jacob).

Additionally, students submitted anonymous course evaluations at the conclusion of the semester. When asked what they liked most about the course the qualitative feedback from the students was overall positive in terms of the structure and the co-teaching setup. Comments that more directly touched upon the use of *Sons of Anarchy* and the content analysis coding tool included:

The drama we were required to watch and apply on the coding sheets (Student 1).

This course was different from anything I have ever taken. Incorporating the show was such a cool new way to learn and apply knowledge. Really enjoyed it (Student 2).

I really like the use of a television show to teach deviance. The coding sheets were at times tedious but really helped (Student 3).

Lastly, when asked what suggestions they have for helping the instructors improve this course, one student mentioned, “more examples on how to do the coding sheets”. From these comments we gather that while students may have initially felt that watching the show and/or coding episodes was tedious, ultimately they felt positive towards the overall setup of the course.

Discussion/Conclusion

This study expands on the growing body of sociological literature that incorporates television and film into the classroom environment to enhance student learning in several important ways. First, similar to other teaching scholars drawing on films like *Batman* (Wosner & Boyns, 2013) and popular television shows like *The Simpsons* (Eaton & Uskul, 2004; Nefes, 2014), *Desperate Housewives* (Melander & Wortmann, 2011), and *The Wire* (Trier, 2010), we illuminate the ways in which *Sons of Anarchy* was able to stimulate and enhance students’ understanding of the sociology of deviance. Additionally, we expand on this pedagogical practice by incorporating a content analysis coding tool, which when combined with the show, creates a systematic teaching method enabling students to more actively engage in the course while enhancing connections to the course materials.

The connections to course materials that we focus on here are students’ understanding of deviance as a socially constructed phenomenon. In defining *which characters* were deviant, students reported that individuals with institutional and/or organizational power and status who engaged in behaviors to preserve their power, no matter the severity, were perceived as deviant. On the other hand, individuals acting on behalf of the “greater good”, no matter the severity, were not characterized as deviant. In defining *what acts* were deviant, students formulated their decisions by drawing upon the situational context surrounding any given act as opposed to legal definitions. Non-illegal behaviors such as lying, manipulation, cheating, and snitching were perceived by students as deviant. Alternatively, illegal acts such as murder, aggravated assault, extortion, and money laundering were seen as non-deviant so long as they were done for the good of the club, family, or the larger community.

Ultimately, after analyzing students’ final projects, class discussions, and course evaluations, it is clear to us that incorporating the *Sons of Anarchy* in conjunction with the content analysis coding tool resulted in a synergistic learning environment for our sociology of deviance course. Due to space constraints we are unable to demonstrate evidence of students’ learning on a variety of other topics addressed in this course including: personal troubles/public issues, criminological theory, techniques of neutralization, deviant identity formation, and the comparison of *Sons* with empirical research on motorcycle gangs more generally.

For those interested in incorporating *Sons of Anarchy* and the content analysis coding tool in their own deviance courses, a number of topics can be explored. For example, students can compare and contrast motorcycle clubs with street gangs or other criminal enterprises, explore the club’s involvement in street vs. white-collar crime, or investigate the gendered nature of offending/deviance. Another possibility entails coding and comparing *Sons of Anarchy* with other crime dramas to see how crime/deviance is portrayed across an array of shows in popular culture and whether the shows are reflective of empirical reality. Students can also be more

involved in the creation of the coding tool and rather than draw on just their own data, students can work in groups analyzing different episodes, seasons, or series. More importantly, the content analysis coding tool can be tailored for other courses to help students examine the sociological content of a wide variety of shows. For example, students could perform a gender analysis of the show *Girls*, explore the institution of healthcare in *Grey's Anatomy*, or assess the portrayal of female offending and incarceration in *Orange is the New Black*.

We recognize that the pedagogical potential for using television is highly dependent upon class size (i.e., it is easier done in a seminar style classroom with small class size), easy accessibility to the show of choice, and a willingness to develop the course around topics related to that show. While we felt a minimum of two seasons of *Sons* was necessary to witness character development and to accumulate enough data to analyze this does not mean that watching one season, or even a couple of episodes would not be valuable, especially when utilizing the content analysis coding tool and teaching specific topics. Moreover, we acknowledge this study lacks quantitative assessment of students' comprehension yet it was the small number of students in this course that allowed us the opportunity to pilot this study. Lastly, although co-teaching may not be an option in most courses we found that this set up enhanced our ability to more accurately assess student learning during in-class discussions. Despite these possible logistical issues, it should be noted this set-up was found to enhance in-class discussions, participation, and attendance. Each day the students came to class energized to share and when specific examples were discussed everyone was on the same page and better able to make connections to course materials.

Appendix 1: Content Analysis Coding Tool

Content Analysis Coding Tool: *Sons of Anarchy* (Seasons 1 & 2)

1. Season/Episode; Title of Episode_____

2. Type of Criminal/Deviant Activity (check all that apply)

- | | |
|--|--|
| <input type="checkbox"/> Murder 1 | <input type="checkbox"/> Liquor Laws/Drunkenness |
| <input type="checkbox"/> Murder 2 | <input type="checkbox"/> Driving Under the Influence (DUI) |
| <input type="checkbox"/> Forcible Rape | <input type="checkbox"/> Forgery/Counterfeiting |
| <input type="checkbox"/> Aggravated assault | <input type="checkbox"/> Fraud |
| <input type="checkbox"/> Robbery | <input type="checkbox"/> Embezzlement |
| <input type="checkbox"/> Burglary | <input type="checkbox"/> Stolen property |
| <input type="checkbox"/> Larceny-theft | <input type="checkbox"/> Offenses against family and/or children |
| <input type="checkbox"/> Motor Vehicle theft | <input type="checkbox"/> Disorderly Conduct |
| <input type="checkbox"/> Kidnapping | <input type="checkbox"/> Vandalism |
| <input type="checkbox"/> Arson | <input type="checkbox"/> Suspicion |
| <input type="checkbox"/> Simple assault | <input type="checkbox"/> Curfew & Loitering laws |
| <input type="checkbox"/> Weapons offense | <input type="checkbox"/> Runaways |
| <input type="checkbox"/> Prostitution | <input type="checkbox"/> Vagrancy |
| <input type="checkbox"/> Infidelity | <input type="checkbox"/> Gambling |
| <input type="checkbox"/> Sex offenses | <input type="checkbox"/> Other? (please specify_____) |
| <input type="checkbox"/> Drug abuse | |

3. Was a weapon used? ____yes ____no

If yes, please specify _____; How was it used?

4. Other details of crime(s):

a. Time of day: (early morning, late night, etc.)_____

b. Location: (home, street, strip club, parking lot, in prison, etc.)_____

c. #of Victims/# of Offenders:_____; _____

d. Relationship between victim(s) & offender(s) (husband-wife, parent-child, rival gang member, etc.) Explain.

e. Offender Motive(s): (money, jealousy, hate, rage, revenge, accident, etc.). Link this up to THEORY!

f. Other important details surrounding the offense(s). Explain.

5. Symbolism/Presentation of Self:

Presentation of self:

Front-stage vs. backstage:

Hiding/managing stigma (Link with techniques of neutralization!):

6. Do YOU consider the behaviors listed deviant given the situational context? Why or why not?

7. How do the assigned readings for this day apply to what happened in these episodes?

Appendix 2: Final Project Assignment

Sons of Anarchy Final Project Requirements

Step 1: Pick your most liked AND most hated character from *Sons of Anarchy*. This means that you will be analyzing two characters!

1) Introduce your reader to each character—who are they? What is their relationship to the club? What role do they serve to the club/in the club?

Step 2: Using your content analysis coding tool, identify the three most deviant and/or criminal acts/behaviors that each of these individuals was involved in. Remember that deviant behavior does not necessarily equate to criminal behavior. Also remember that deviance can be both positive and negative!

1) Describe each act/behavior and WHY they are defined as deviant? Are they defined as deviant to the person(s) engaged in them? Why or why not? WHY did they commit these deviant and/or criminal acts? What THEORIES can you use here? (You must pick a minimum of 2 theories). Are these acts/behaviors the result of personal troubles or public issues? Explain!

2) How did these characters manage their deviant (or perhaps not so deviant) identities? How did they appear and act in the front vs. the back stage? Did their presentation of self change at all over the first two seasons? (If they happen to be in the first two seasons). Explain!

Step 3: Explanation of choices.

1) Why is _____ your most liked character? Did you find yourself rooting for this person even though they were engaged in deviant and/or criminal behavior? How can this be? Would you personally define this person as deviant? Why or why not?

2) Why is _____ your most hated character? Were the acts/behaviors that they were engaged in any more or less deviant than your most liked character? Would you personally define this person as deviant? Why or why not?

3) Overall, how did watching and coding *Sons of Anarchy* help you to understand and critically think about deviance?

Step 4: Create a Digital Poster

1) Using pictures, words and/or quotes create a digital poster of either your most liked or most hated character! Thus, the poster is only about one person! This poster should be a visual character summary and should give your audience insight into WHY they are your most liked or most hated character. You will present this poster to the class during our final class meeting.

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An Assessment of Group Size in Interteaching

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Abstract: A key component of interteaching, as described by Boyce and Hineline (2002), is the opportunity for students to participate in "dyadic" or pair discussions. Although the rationale for pair discussions is evident, only one study involving interteaching, to date, has evaluated the relative effectiveness of student performance when group size is manipulated. The present investigation was designed to further evaluate the effect of group size during student discussions on quiz scores in an introductory psychology course with a diverse group of learners. An alternating treatments design was implemented whereby students were assigned to work in a dyad or in groups of 4-5 students to discuss a preparation guide. All of the major components of interteaching were in effect during both conditions (i.e., availability of prep guides and quality points, clarifying lectures, and frequent test probes). Results showed a small advantage for performance following discussion in dyads. A social validity measure indicated students favored discussion in larger groups. Implications of these findings and suggestions for future work will be discussed.

Keywords: Interteaching, group size, pair discussion, component analysis, college students

Interteaching is an empirically supported, behaviorally-based teaching strategy that offers an alternative to lecture for classroom instruction. Interteaching includes several key components: 1) preparation guides that generally serve as a study guide for students and cover a small amount of assigned reading material; 2) an in-class discussion with one classmate to review responses to the preparation guides completed before class; 3) completion of a record sheet to provide feedback to the instructor on the quality of the in-class discussion and topics that were most challenging; 4) clarifying lectures to cover class topics based on feedback provided on record sheets; 5) frequent test probes on the material from the assigned reading material and prep guides; and 6) quality points, a cooperative contingency whereby additional points are delivered if all members of a respective discussion group perform at or above a certain criteria on a question(s) or an entire test probe. For a more complete description of these components, please see Saville, Lambert, and Robertson (2011).

The authors who developed interteaching describe it as a "mutually probing, mutually informing conversation between two people (Boyce & Hineline, 2002, p. 220); thereby highlighting the importance of one of the key components of interteaching - the pair discussion. The pair discussion component requires students to come to class prepared to interact with a classmate. During the pair discussion, students share information on preparation guides assigned for each class period, and provide feedback on their discussion to the instructor in the form of a

record sheet. In this respect, interteaching, and pair discussion, in particular, is similar to other teaching strategies, such as reciprocal peer tutoring and cooperative learning, which promote a collaborative learning and achievement model (Johnson & Johnson, 1975; Leung, 2015; Slavin, 1996, 2014).

There is emerging empirical evidence to support the use of interteaching when compared to traditional lecture (Arntzen & Hoium, 2010; Saville, Zinn, & Elliot, 2005; Saville, Zinn, Neef, Van Norman, & Ferreri, 2006; Soldner, Rosales, & Crimando, 2015). A growing number of studies have also shown consistent academic achievement when interteaching is used with no direct comparisons to lecture. Notably, many studies have also evaluated students' perspectives and preference for interteaching via social validity measures. For example, Saville and colleagues (2006) asked students to complete a two-item questionnaire at the end of the semester that asked which of the two teaching methods they preferred, and to rate their extent of learning from each method. Zayak and Paulk (2014) had a similar approach to evaluate social validity, but included additional open-ended questions in the form completed by participants. The reported preference for interteaching when compared to lecture has been mixed, with at least some studies reporting student preference for interteaching while others reported preference for lecture even when interteaching was more effective (see Querol, Rosales, & Soldner, 2015 for a review of empirical research on Interteaching including the use of social validity measures).

To date, only a handful of studies have conducted component analyses to help identify the impact of each element of interteaching. For example, Saville, Cox, O'Brien, and Vanderbelt (2011) evaluated the impact of the clarifying lecture on the efficacy of interteaching. Results of this study showed better performance on two exam scores when lectures were included. Saville and Zinn (2009) examined the impact of quality points on student performance, but reported no statistically significant differences in exam scores. In contrast, Rosales, Soldner, and Crimando (2014) reported better results on quiz performance when quality points contingency and immediate feedback on performance was included in the implementation of Interteaching in the classroom.

Soldner, Rosales, Crimando, and Schultz (2017) conducted a component analysis of the pair discussion component on interteaching in an online graduate rehabilitation course. In this study, two conditions were randomly assigned across participants and class sessions. The first condition included all key components of interteaching, including the pair discussion. The second condition included all key components with the exception of the pair discussion. Results indicated the pair discussion condition resulted in higher student quiz scores. Additionally, social validity findings indicated the majority of students preferred interteaching with the pair discussion. This component analysis provides preliminary empirical evidence for the importance of including the pair discussion component in the implementation of interteaching in the classroom. Although, further investigation is needed regarding the particular and most effective methods used for compiling students into discussion groups, including the number of respective students in each discussion group.

One rationale for grouping students in dyads is that it may help to control for the possibility of students underpreparing for in-class discussions with a classmate. That is, when students are in larger groups the possibility of "free-riders" or social loafing tends to increase (Chidambaram & Tung, 2005; Latane, 1981). The possibility of social loafing can be remedied if students are in dyads for discussion. Placing students in dyads for discussions also presents equitable opportunities for each student to share their perspective on each prep guide item and thus may improve the overall quality of the discussion. However, placing students into dyads

may present some concerns. Specifically, instructors may feel that traversing the classroom and facilitating discussion equally among all the groups when students are in dyads poses a challenge because they are limited in the time they can spend with each dyad. This challenge may be especially evident when teaching assistants are not available during class time or in classes with larger student enrollment (Scoboria & Pascual-Leone, 2009). For this reason, it is important to systematically evaluate the feasibility and validity of assigning larger groups during class discussions. In addition, a study by Goto and Schneider (2010) reported students preferred to work in larger groups during interteaching. Other researchers have suggested, for example, that cooperative learning works best when group size is smaller, although this research has not been evaluated within the framework of interteaching specifically (Johnson & Johnson, 2009).

A recent study by Truelove, Saville, and Patten (2013) systematically manipulated group size for interteaching sessions and evaluated the impact on student performance. Students from two sections of an undergraduate psychology course served as participants. In one class section, students were assigned to work in groups of two during all interteach sessions; and in the second section, students were assigned to work in groups of four during all interteach sessions. Students were assigned to either groups of two or groups of four in a random fashion throughout the semester. The researchers reported no statistically significant differences between the sections on six exams administered throughout the semester, or on a cumulative final or the total number of points earned. The authors of this study outlined some notable limitations to their study.

First, a ‘no discussion’ condition was not included. As previously mentioned, at least one prior study has now examined the impact of the pair discussion component, showing favorable results for the inclusion of the pair discussion in interteaching (Soldner et al., 2017). Second, the participants were comprised of a relatively homogeneous sample of psychology students enrolled in a “more selective” university, as designated by the Carnegie Foundation (Truelove et al., 2013). This institutional distinction refers to the rigorous admissions criteria, as well as strong academic backgrounds of the students enrolled at the university.

Overall, the limited amount of empirical research on the impact of pair discussion as a component of interteaching, and the effect of group size for the pair discussion, in particular, warrants further attention. Therefore, the aim of this study was to evaluate the impact of group size during pair discussions with a more heterogeneous group of undergraduate students enrolled in an introductory psychology course at a university located in an urban area of the United States. Specifically, the research question in this study was: What is the impact of group size during interteach sessions on chapter quizzes administered following in-class discussion in dyads compared to groups of 4-5 students?

Method

Participants and Materials

Thirty-five undergraduate students aged 18-40 ($M_{age} = 22$, $N_{male} = 15$; $N_{female} = 20$) enrolled in an introductory psychology course provided informed consent at the end of the semester for use of their class-related information for research purposes. The course fulfilled a general education requirement and met twice per week for 75 minutes. All participants were full-time students at the time of the study and the majority ($N = 25$) worked at least one part-time job during the course of the semester. The majority were underclassmen ($N_{freshman} = 18$ and $N_{sophomores} = 10$; see Table 1) and there were representatives from 18 different majors (see Table 2).

Table 1. Demographic information for all students

	<i>N</i>
Sex	
Male	15
Female	20
<i>M</i> Age	22
<i>M</i> GPA	3.1
Class Standing	
Freshman	18
Sophomore	10
Junior	2
Senior	5
Employment Status	
Yes	25
No	8
No Response	2
Ethnicity	
White	28
Hispanic/Latino	1
Black/African-American	5
Prefer not to answer	1

Table 2. Declared Major for all students

	<i>N</i>
Business/Pre-Business/Business Management/Marketing	
Nursing/Pre-Nursing	7
Engineering/Civil/Mechanical/Electrical Engineering	6
Exercise Science	5
Psychology	2
Accounting	2
Art Education	1
Criminal Justice	1
Dental Hygiene	1
Dietetics	1
Early Education	1
English	1
Environmental Studies	1
Fashion	1
Geography	1
Philosophy	1
Professional Writing and Editing	1
Social Work	1
	1
<i>Total</i>	35

The instructor for the course (the first author) created all preparation guides and made them available to students at least one week before the scheduled in-class discussion of the assigned reading material. Each prep guide reviewed 5 to 10 pages of material and included definition, conceptual, and applied questions (see Appendix 1 for a sample prep guide used in this course).

Dependent Measures and Experimental Design

We implemented an alternating treatments design whereby we placed students in a dyad or in a group of 4-5 to discuss the assigned prep guide during each class meeting. The experimenters assigned the condition for each class session in a quasi-random fashion by a coin flip before the start of the semester. We implemented a rule such that the same condition (i.e., groups of 2 vs. groups of 4-5) occurred during no more than two consecutive sessions. Assignment to work with one or more classmates was done by the instructor. Students learned of the condition in place for each class session following the clarifying lecture, immediately before the instructor assigned them to a group. The instructor made group assignments according to the student's first name, last name, color of clothing worn that day, seating arrangement (e.g., students sitting in close proximity to one another, students sitting across the room from one another). The instructor made assignments such that students had few opportunities to work with the same classmates throughout the semester. However, given the number of students and the number of prep guides,

we did not ensure that students worked with a different classmate for every single group discussion.

The primary dependent variable for the study was average performance on 15-pt. chapter quizzes. The instructor based quiz questions on the information presented in one prep guide per quiz, and required students to provide or apply a definition, recall information from the readings, or apply knowledge to novel examples. Question format included multiple-choice, fill-in-the-blank and short-answer-type questions. Ten quizzes were included as part of the data analysis, with an even number assigned to each condition.

A secondary dependent measure consisted of a brief social validity questionnaire created for the purpose of this study. The instructor distributed a brief questionnaire to the students at the end of the semester. The questionnaire included the following questions: **1)** Overall, which type of group did you like working with more? **2)** Overall, which type of group did you feel you learned the most with? Students were required to respond to each question by selecting one of the following responses: **A)** Pair Discussion (working with just one other student), **B)** Larger group (working in a group of 4-5 students), or **C)** No preference or I learned the same amount from both types of groups. We added this measure as a way for the students to provide feedback on their experience in the course and as an assessment of any possible correlations between outcome performance and responses on the self-report. Previous studies have used this or similar social validity questionnaires as a way to evaluate student perceptions of interteaching (Saville et al., 2006; Soldner et al., 2015).

Interobserver Agreement

Two independent graders scored seven of the quizzes throughout the semester (70% of total quizzes administered). The instructor omitted student names and made copies of the paper quizzes before grading to prevent any potential instructor bias. The instructor of the course served as the primary grader for each quiz. The instructor provided the secondary grader (a graduate teaching assistant for the course) with an answer key to score the quizzes assigned for interobserver agreement (IOA). We calculated IOA by summing the number of agreements and dividing by the number of agreements plus disagreements and multiplying by 100. For research purposes, IOA is “acceptable” if it is above 80% and “good” when it is above 90% (House, House, & Campbell, 1981). Mean overall IOA was 89.84% (range 83.81-95.04%).

Procedure

The procedure for this study was as follows: the students had access to the preparation guides at least one week before each due date on the Blackboard site used for the class. Students were responsible for completing each assigned prep guide before arriving to class. Upon arrival to class, the instructor delivered a clarifying lecture on the previous class session’s topic based on student feedback on record sheets completed during the previous session. This lecture lasted approximately 25 minutes. The remainder of the class time was devoted to discussion on the prep guide due for that class session and completion of a record sheet and assigned quiz.

The instructor assigned students to work with either one other student (dyad) or in a group of 4-5 students. The larger group was comprised of four or five students depending on the number of students present for class on the days designated to the larger group condition. Following each interteach session, students were given approximately 5-6 minutes to complete a

record sheet to provide feedback on the quality of the discussion and ask for clarification or further help on topics they found most challenging. Students submitted the record sheets to the instructor at the end of each class session. Students received participation points for each completed record sheet. Participation points comprised 33% of the students' final grade.

The instructor used the information gathered from the record sheets to create a clarifying lecture for the next class session, as described above. Following completion of each record sheet, students were administered a 15-pt. in-class quiz. Quizzes covered only the information from the prep guide discussed during each class session. In addition, quality points were awarded to students if all members of the group received a score of 80% or higher on a quiz. This cooperative contingency resulted in two 'bonus' points added to each student's respective quiz score. If any student in the dyad or group received a score below this criterion, no student from that group received quality points. Students received immediate feedback on their performance following every quiz by delivering an answer key upon submission. This immediate feedback may enhance the value and effectiveness of quality points, as has been suggested in previous research on this topic (Rosales et al., 2014).

Results

We used an Excel workbook to enter all data for future analysis, as well as creation of figures for visual inspection, and statistical analyses. The results presented in the Figures below include scores only for quizzes administered in class. We omitted quizzes completed by students outside of class for make-up purposes from the analysis and any '0's' assigned for missing class. The instructor assigned students to work in dyads for discussion prior to delivery of quizzes 1, 3, 5, 6, and 8; and assigned students to work in groups of 4-5 for discussion prior to delivery of quizzes 2, 4, 7, 9, and 10.

Figure 1 depicts results for the average quiz performance during all class sessions. These results indicate overall performance was slightly better following discussions in dyads ($M = 12.01$, $SD = 1.31$) when compared to performance following discussions in groups of 4-5 ($M = 11.17$, $SD = 0.47$). There appeared to be an increasing trend in quiz scores following discussion in dyads (see Figure 1). The difference in average scores represents a difference between a "B" letter grade for quizzes following discussion in dyads, and "C" for quizzes following discussion in groups of 4-5.

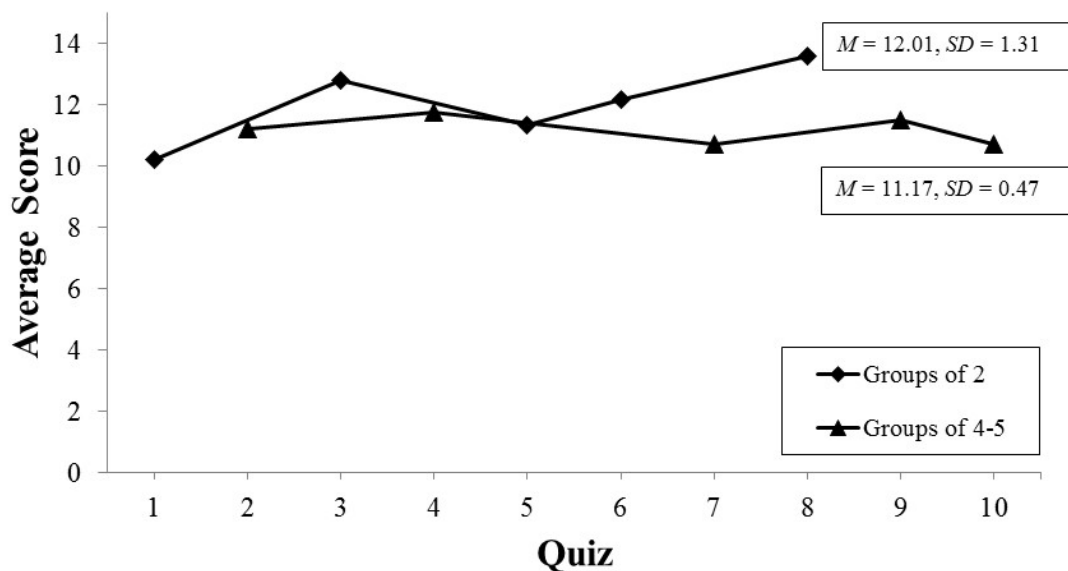


Figure 1. Average Class Quiz Performance

Figure 2 shows individual average quiz scores for all class sessions. The results indicate that 28 of the 35 students performed better on quizzes preceded by discussion in dyads. A paired-samples t-test was conducted to compare the individual score averages on quizzes preceded by a student placed in dyads and quizzes preceded by students placed in groups of 4-5. There was a significant difference in the scores for dyad discussion ($M = 11.95$, $SD = 1.63$), and discussion in groups of 4-5 ($M = 11.15$, $SD = 1.92$), $t_{35} = 3.70$, $p < .001$. These results confirm that students performed better on quizzes following discussion in dyads compared to discussion in groups of 4-5.

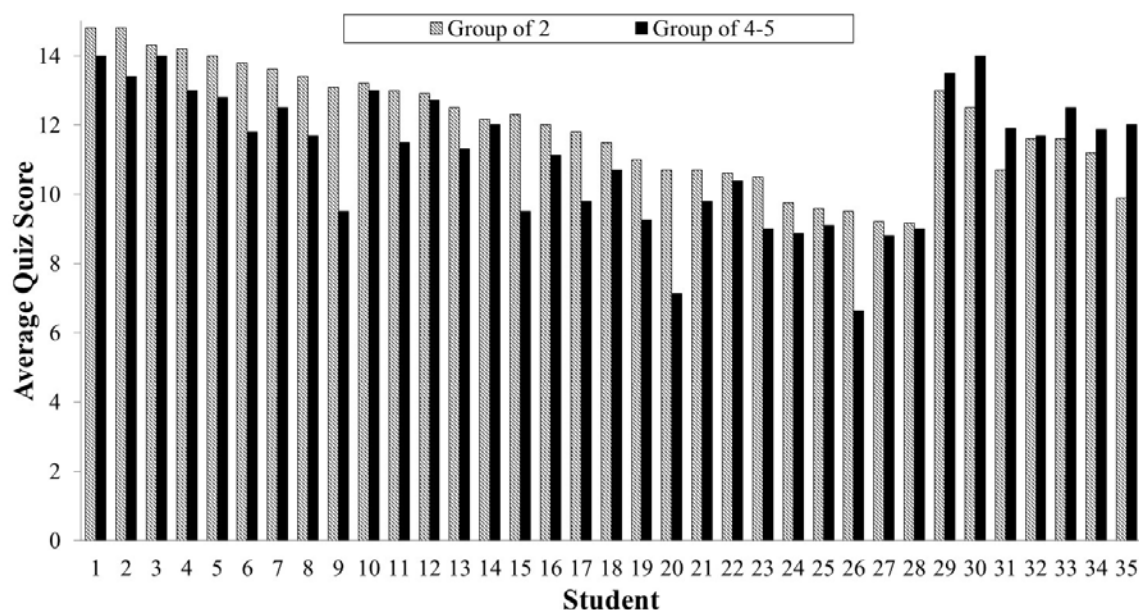


Figure 2. Average Individual Quiz Performance

Social validity measures administered at the end of the semester suggest students' overall preference was for working in larger groups, and their perceived learning was greater following discussion in larger groups (see Table 3). A common rationale provided by the students for preference and more perceived learning when working in groups of 4-5 was that when multiple students facilitated discussion with multiple opinions, it led to a better chance of achieving correct answers on prep guides. These were the subjective opinions of the students, and it did not reliably reflect the scores assigned for each quiz.

Table 3. Social Validity Data

Question	Percentage (#) of students
1. Overall, which type of group did you like working with more?	
a. Pair discussion (working with just one other student)	34.29% (12)
b. Larger group (working in a group of 4-5 students)	51.43% (18)
c. I liked both equally	14.29% (5)
2. Overall, which type of group did you feel you learned the most with?	
a. Pair discussion (working with just one other student)	25.71% (9)
b. Larger group (working in a group of 4-5 students)	51.43% (18)
c. No preference or I learned the same amount from both types of groups	22.86% (8)

Discussion

The results of this study provide support for interteaching sessions that includes discussions in dyads, as described in the seminal article on interteaching by Boyce and Hineline (2002); and are in contrast to the findings of Truelove and colleagues (2013). There are differences in the procedure of each study and in the student body demographic, that should be considered in the evaluation of these results. First, one of the primary aims of the present study was to replicate the findings of Truelove et al. with a more diverse student body. Notably, the participants in this study were from 18 different majors in the university, were mostly underclassmen, and included some non-traditional undergraduate students (age range 18-40). In contrast, students in Truelove et al. (2013) were all traditional upperclassmen Psychology majors. These differences may be of importance because students in their junior and senior college years will typically have a longer history of exposure to lecture-based classes.

Second, of the 35 student participants in this study, 43% were male. This is also a notable difference because previous research has suggested that women tend to perform better in higher education settings than men (Truelove et al., 2013). In addition, 71% were working at least part-time. Previous studies have not reported data on job status of their participants, but it is perhaps an important variable to consider for future research on interteaching. That is, if students are balancing work and school responsibilities they may benefit from specific contingencies that promote study time outside the classroom.

Third, there was a difference in the primary dependent measure. Namely, the present study evaluated the impact of group size on performance in quizzes worth a total of 15 points and covered a small amount of material (1 chapter from 1 prep guide); compared to exam probes covering 3-4 prep guides worth of class materials (Truelove et al., 2013). Fourth, we included a

quality points contingency for the present study, which was missing from the procedure outline by Truelove and colleagues. There is some evidence for the positive impact of quality points on student learning outcomes when they are included in interteaching (Rosales et al., 2014). It is possible that inclusion of quality points across the two conditions had an impact on student performance in this study. This was not part of the data analysis for this study, but future research should investigate the impact of individual and group allocation of quality points between conditions. In particular, it will be important to investigate if the inclusion of quality points between different discussion group sizes impacts student learning. For example, students may perceive that quality points are more attainable and subsequently more motivating following discussion in dyads compared to larger discussion groups (i.e., 4-5 students or more) because only one other student must meet the cooperative contingency requirement. This may affect individual and group performance in larger discussion groups.

Future studies on this topic should continue to evaluate relevant demographic and other relevant student characteristics and its impact on student learning and satisfaction. For example, Saville, Pope, Truelove, and Williams (2012) investigated the relations between student GPA performance and demographic variables on exam performance during interteaching and lecture and found that interteaching improved performance most notably for students with low and moderate GPAs. Although we did not systematically consider GPA as a variable in this study, the average GPA for students in this study was 3.1 (range of 2.0-4.0). This variable may also have an impact on performance when in-class discussions are in dyads vs. larger groups.

Future research should also address the limitations of the present study. First, the content of each chapter was not counterbalanced. The possibility that content of respective quizzes over the course of the class was not equally difficult cannot be ruled out. We attempted to control for this potential confound by randomly assigning the group size throughout the semester. However, in order to control for the possibility that the content of chapters assigned to dyad interteaching sessions were less difficult than those assigned to group discussions, counterbalancing of the two conditions needs to be conducted. Second, future studies should also attempt to replicate these procedures in online and blended courses, especially given the increased prevalence of this course format in higher education (Soldner et al., 2017). Third, we did not include a control condition. Instead, all class sessions included some interaction amongst the students present in class. Future studies may wish to replicate this work by including a third condition where students are required to independently review the content of the completed prep guide during class time before administration of a quiz.

Despite the noted limitations of this study, this study is the first to empirically support the effectiveness of interteaching using dyads during class discussion when compared to discussion in groups of 4-5 students. These results also provide initial evidence for the importance of group size as part of the pair discussion component of interteaching and have important implications for student learning and satisfaction.

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We thank Mathew Swerdan, Joseph Veneziano, and Beatriz Querol Isabelle Del Rosario for assistance with data analysis.

Appendix 1. Sample Prep Guide

Prep Guide: Chapter 2

1. What are behavioral genetics and evolutionary psychology? Discuss how evolutionary psychologists use Darwin's principles of natural selection and genetic mutations to explain human behavior.
2. Describe the nature-nurture debate. What approach do most psychologists today take on this debate today?
3. Identical twin boys raised in different households demonstrated great similarity in their personalities when reunited 20 years later. Is this evidence for the predominance of *nature* or *nurture*? Be sure to explain why your answer is correct.
4. Differentiate between monozygotic and dizygotic twins. Which type of twins share the greatest genetic overlap?
5. Diagram a neuron, including all the major structures. Then describe the major function(s) of each. (NOTE: If you are not artistically talented, don't worry about it! It will help for you to create your own picture to use as you study for the review exam and quiz).
6. Briefly describe the process of neural communication between and within neurons. What role does an action potential and synaptic gap play in communication between neurons? What happens when there are leftover neurotransmitters in the synaptic gap?
7. Distinguish between agonists and antagonists by answering the following question:
_____ such as Prozac mimic the effects of the neurotransmitter serotonin, whereas _____ include anti-psychotic drugs that block the action of the neurotransmitter dopamine.
8. Describe the main function of the endocrine system. Then, explain the difference between hormones and neurotransmitters. You may use the analogy of sending email messages described in your text to note this difference.
9. Differentiate between the central nervous system (brain and spinal cord) and the peripheral nervous system (autonomic and peripheral nervous systems), including the major functions of each system.
10. Describe recent research regarding neuroplasticity and neurogenesis, and the role of stem cells in the treatment of various brain dysfunctions. As you describe this research, make sure to provide definitions of each term.
11. What are the rooting and Babinski reflex, and why are these reflexes important to assess in infants?
12. What is the purpose of the hindbrain? Identify its three key structures and main functions of each.
13. What is the purpose of the midbrain and the forebrain? Identify the key structures and main functions of each structure.
14. What is the purpose of the corpus callosum and what happens when it is severed?
15. What part of a person's brain would be affected if after brain damage they could speak quickly and easily, but could not understand what they read or heard? (Wernicke's area)

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Understanding the University and Faculty Investment in Implementing High-Impact Educational Practices

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Abstract: A variety of assessment options that incorporate high-impact educational practices (HIPS) have emerged to assist higher education faculty in meeting student learning outcomes. HIPS are teaching and learning tools which have been demonstrated to increase student engagement and persistence. Practices such as first-year seminars, tech-rich learning communities, collaborative projects, undergraduate research, service learning, practicums, and internships are meaningful educational tools used to assess/measure a student's cumulative learning at various intervals. However, utilization of these practices is not often applied systematically due in part to the required investment of time, training, and money. This paper describes HIPS that support course and program-level learning outcomes in conjunction with the required investments for implementation of each. An exploration into why these types of practices are critical to student learning and success unveils which students have access to these opportunities. Findings emphasize the value of investing in these practices for all students in order to ensure student success, satisfy university accreditation standards, and meet the current mandates of our government's "completion agenda" which is geared towards preparing America's future workforce.

Keywords: Higher education, assessment, learning outcomes, high-impact practices, faculty development

When designing degree programs and courses, higher education faculty set educational goals for students that begin with learning outcomes at the program and course levels. Meeting those learning outcomes in today's college classroom should include active learning and a variety of meaningful assessment tools and methods (Association of American Colleges & Universities [AAC&U], 2015). However, in practice, meeting these goals can be influenced by many factors with a predominately negative influence coming from the amount of faculty time and training required in addition to budget constraints.

Asking degree program coordinators about their level of involvement and what decisions were made about courses or entire programs in the past year is one way to enhance goal setting. To support budgetary decision making and investment concerns, it is important to know what evidence was used to support those decisions and what influence on a course or program was intended with those decisions. Although instructors do not always articulate an end result in advance, this is the process of outcomes-based assessment and the development of competencies (Leutner, Fleischer, Grünkorn, & Klieme, 2017). The desire to meet these learning outcomes is there, but are institutions investing in high-impact educational practices (HIPS)? If so, are the investments being utilized in a meaningful way in practice?

Since the mid-1990s, the importance of active learning in higher education has been steadily increasing as the shift from lecture-based courses to actually producing learning has

evolved to include evidenced-based assessment (AAC&U, 2015). Assessment practices are also becoming more complex and often vary from the traditional test or basic exam to more meaningful ways to measure student learning (Kuh, 2008). However, implementation of these practices and assessments comes at a cost. Workforce development in conjunction with the completion of licensure, certification, and degree programs is at the forefront of requirements from governmental funding models for public colleges and universities (United States Department of Education, 2011). Findings will prove that if institutions and faculty are not investing in HIPS, retention and completion suffer which may result in a loss of state funding. The purpose of this research is to demonstrate the importance of the investment in HIPS as a primary factor in today's educational funding environment and to encourage policymakers, institutional leadership, and faculty to incorporate meaningful and measureable assessments through HIPS by balancing the required investment of time, training, and money.

Beginning with a background on assessment and then moving through a description of various assessments of student learning using HIPS, methods such as first-year seminars, tech-rich learning communities, collaborative projects, undergraduate research, global/diversity learning, service learning, practicums, and internships are explained. The ability to use HIPS and then measure the impact on a student's cumulative learning is examined. To establish a basis for the implementation of HIPS, the professorial viewpoint is included in a discussion about the development of outcomes and assessments. Next, the investment in HIPS is factored into the use of active learning practices, as an unsystematic approach is evident in many programs and across campuses often with good reason. The required investment of time and money and sometimes faculty training is explained in addition to factors for faculty buy-in and involvement.

Finally, exploration into why these types of HIPS are effective and which students have access to them emphasizes the need for this investment and explains why some students are not exposed. The paper concludes with the mandates of the "completion agenda" which are geared towards preparing America's workforce but are also emphasizing the need for active learning, guidelines for learning outcomes across the curriculum, and high-impact assessment (United States Department of Education, 2011). Institutions and their state governments need to work together to prioritize on-time graduation (Complete College America, 2013).

Background on Assessment and Investment

Sackett, Schmitt, Ellingson, and Kabin (2001) confirmed that testing for knowledge, skill levels, and abilities often contributes to the decision-making process for jobs and education placement. Users of such tests like employers or educators often face difficult choices when trying to optimize the performance of chosen individuals, and selection of materials that assess the full range of relevant attributes is important (Sackett, et al., 2001). Assessment should be meaningful (expert driven) and manageable, taking into account varying resources (Bresciani, 2015). Barr and Tagg (1995) recognized the shift from the traditional, dominant teaching and "Instruction Paradigm" to the "Learning Paradigm" which focuses the college's purpose to produce learning using a variety of means. They also recognized that with this shift comes an increase in cost (Barr & Tagg). It is difficult to increase outputs without increasing resources. Quality is threatened without support for teaching; yet budgets have remained stable or declined (Barr & Tagg). According to Shumway and Harden (2003), factors of validity, reliability, impact on learning, and practicality including cost should be taken into account when instruments are chosen to assess learning outcomes.

Unfortunately, researchers offer many examples of practices that can become cost prohibitive. For example, first-year seminars and experiences often include a research component; however, undergraduate research in a course or degree program can be costly as the investment varies based on the intensity of each instance and the ability to present or compete with the research results (Kuh, 2008). In addition, students often conduct research projects under the supervision of faculty or with faculty at the graduate level which can incur costs, but there are few opportunities at the two-year level where obtaining funds can be an issue (Kuh, 2008).

Other examples of HIPS that can become costly are practicums and internships, which involve often unforeseen and unplanned costs to students, employers, and universities. In a study at Northwestern University (2015), researchers found that many universities have required fees for internship courses, and the cost to students can be phenomenal especially when good opportunities come in the summer when students do not typically receive financial aid dollars to enroll in internship courses. Adding to this, some companies exploit student workers with unpaid labor, although it is illegal for a student's work to provide an immediate advantage to the employer (Northwestern University, 2015). Still, grant monies can assist students, and federally funded internships can provide work-study dollars to student interns (Northwestern University, 2015).

An acknowledgment of the costs associated with the implementation of high-impact practices is found in the University System of Maine's (USM) Title III High-Impact Educational Practices grant offering (USM, 2013). USM offers \$500 to their institutions to support community-based experiential learning/field trips, supplies, materials, training and development (for faculty and students), speakers, student workers, learning communities/collaborative learning, and software/web-based resources (USM, 2013). As state budgets continue to tighten funding to education, making the dollars stretch is vitally important.

Active Learning Practices and Assessments

It is not only important to have assessments that assist in meeting accreditation requirements, model best practices, and meet national benchmarks, but it is also critical to meet student needs beyond the college experience; traditional test and exams meet this criterion at minimum (Dowling, Godfrey, & Gyles, 2003). Wiggins (2014) posits that if a program's goals are to provide students with opportunities to develop their leadership skills, how does a standardized test or basic, objective final exam measure that skill? It does not, and there are a variety of reasons why instructors in higher education continue to use tests and exams versus other assessment methods (Wiggins, 2014). Reasons include lack of time, lack of knowledge regarding other methods, lack of funds, and miscommunication about what actually constitutes an appropriate, measureable assessment of course goals (Wiggins, 2014). Understanding these practices and their importance is key to turning this challenge around to meet outcome goals.

Going beyond the traditional quiz, test, midterm, or final exam involves the inclusion of other assessments of student learning as found in first-year seminars, learning communities, collaborative projects, undergraduate research, global/diversity learning, service learning, practicums, and internships (AAC&U, 2015). A student's individual effort and involvement is critical in determining the impact of college; institutions encourage student engagement by focusing on ways to shape academic, interpersonal, and extracurricular offerings (Pascarella & Terenzini, 2005). The Association of American Colleges and Universities supports the teaching and learning practices listed below as being widely tested and shown to be beneficial for college students from many backgrounds (AAC&U, 2015). These practices take many different forms,

depending on learner characteristics and on institutional priorities, budgets, faculty, and contexts, yet some universities have still been able to link these practices to students' cumulative learning (Kuh, 2008). Unfortunately, on almost all campuses in an AAC&U study, utilization of active learning practices is unsystematic, often to the detriment of student learning (Kuh, 2008).

Below are brief descriptions of the high-impact practices that Kuh's (2008) research suggests increases rates of student retention and student engagement while providing more meaningful ways to assess learning and measure outcomes.

First-Year Seminars and Experiences: Many schools now build into the curriculum first-year seminars or other programs that bring small groups of students together with faculty or staff on a regular basis. The highest-quality first-year experiences place a strong emphasis on critical inquiry, frequent writing, information literacy, collaborative learning, and other skills that develop students' intellectual and practical competencies.

Common Intellectual Experiences: The older idea of a "core" curriculum has evolved into a variety of modern forms such as a set of required common courses or a vertically organized general education program that includes advanced integrative studies and/or required participation in a learning community.

Learning Communities: The key goals for learning communities are to encourage integration of learning across courses and to involve students with "big questions" that matter beyond the classroom.

Writing-Intensive Courses: These courses emphasize writing at all levels of instruction and across the curriculum, including final-year projects. Students are encouraged to produce and revise various forms of writing for different audiences in different disciplines.

Collaborative Assignments and Projects: Collaborative learning combines two key goals: learning to work and solve problems in the company of others and sharpening one's own understanding by listening seriously to the insights of others, especially those with different backgrounds and life experiences.

Undergraduate Research: Many colleges and universities are now providing research experiences for students in all disciplines. Undergraduate research, however, has been most prominently used in science disciplines.

Diversity/Global Learning: Many colleges and universities now emphasize courses and programs that help students explore cultures, life experiences, and worldviews different from their own.

Service Learning, Community-Based Learning: In these programs, field-based "experiential learning" with community partners is an instructional strategy - and often a required part of the course. The idea is to give students direct experience with issues they are studying in the curriculum and with ongoing efforts to analyze and solve problems in the community. A key element in these programs is the opportunity students have to both

apply what they are learning in real-world settings and *reflect* in a classroom setting on their service experiences.

Internships: Internships are another increasingly common form of experiential learning. The idea is to provide students with direct experience in a work setting - usually related to their career interests - and to give them the benefit of supervision and coaching from professionals in the field.

Capstone Courses and Projects: Whether they're called "senior capstones" or some other name, these culminating experiences require students nearing the end of their college years to create a project of some sort that integrates and applies what they've learned. The project might be a research paper, a performance, a portfolio of "best work," or an exhibit of artwork. (Kuh, p. 14-15).

These types of high-impact educational practices are effective when students have access to them. According to Bresciani (2015), program goals often include providing students with opportunities to develop their communication skills, but other than classroom presentations the best way to measure interpersonal and communications skills is through community-based learning such as interviewing professionals, volunteering, practicums, and internships. Still, there are cost factors involved that interfere with access. Travel for students to these locations is one such impediment. Programs in states such as Ohio with internship grant opportunities can help to relieve some of this burden (Ohio Higher Ed, 2014).

University Accreditation and Program Assessment

University accrediting bodies are focused on academic assessment at every level from individual course assessments to program level assessments. Kirkpatrick's (2009) New World Model contains four levels of learning evaluation in a widely known model used to analyze and evaluate the results of training and educational programs. In this model, level one is *reaction* measuring how participants react to the training. Level 2 is *learning* which analyzes if students truly understood and increased their knowledge, skills, or experience. Level 3 looks at *behavior* to see if students are utilizing learned skills at work and if there are any changes in behaviors. Finally, level 4 determines if the course material presented had a positive impact and produced results (Kirkpatrick, 2009).

The implementation of HIPS in a degree program can support efforts to assess program-level learning outcomes. Practices like certification preparation, field trips, and community involvement can follow Kirkpatrick's level one by measuring to what degree students react favorably to coursework as demonstrated in certification testing, field trip responses, and community involvement (Kirkpatrick, 2009). Learning can be measured in level 2 to assess knowledge, skills, attitudes, confidence, and commitment based on a student's participation in degree program projects, capstone projects, portfolios, and grading of portfolios or written work required across the curriculum. Behavior can be measured in level 3 to evaluate the application of learned skills as applied in internships. Finally, in level 4 results can measure targeted outcomes as a result of evaluations by internship site supervisors (Kirkpatrick, 2009).

The Cost Factors of Implementation

The inputs of money and time are vital to any course and program success; the focus here is monetary although the impact for actual implementation often involves significant amounts of time required by faculty which should not be ignored (Allred, Gridley, Larsen, & Mathie, 2013). Although exact costs for specific iterations of high-impact practices are difficult to calculate or pull from budgets, nothing makes the high cost more obvious than the efforts of donors to the cause. In 2011, the Bill & Melinda Gates Foundation and the Lumina Foundation offered “generous funding” to a large-scale research and practice-improvement initiative focused on identifying and promoting high-impact educational practices in community colleges (Center for Community College Student Engagement, 2014). A closer look at budgets, faculty structures, and cost definitions may explain more of the cost factors of implementation.

Budget Concerns

A look at today’s budget concerns in higher education and the subsequent changes to the faculty structure further explain the struggle for implementation of high-impact learning practices. In Ohio, state representatives are enforcing a tuition freeze in conjunction with rewards for higher graduation rates; this message is mixed (Perkins, 2015). Their goal is to raise graduation rates and increase workforce readiness (Governor’s Office of Workforce Transformation, 2015). However, workforce readiness may be difficult to attain without support for high-impact learning outcomes with activity-based learning and quality assessments.

According to Woodhouse (2012), complications of the change from a quarter’s system to a semester’s system left Ohio’s universities struggling. In 2012, Ohio State University went from offering courses in quarters to offering courses in a semester system and in doing so changed its general education requirements (Woodhouse, 2015). The change precipitated a 12 percent decline in credit hour enrollment at the College of Arts and Sciences, compared to an 8 percent decline for Ohio State as a whole (Woodhouse, 2015). These cuts to universities trickle down to degree program budgets and budget items like libraries and software. It also raises the question of which students have access to high-impact practices. Underserved populations (defined as first-generation, minority, transfer, and low-income students) miss these opportunities, and funding is one key factor (Finley & McNair, 2013).

Faculty Structure Changes

Under the “Instruction Paradigm”, Barr and Tagg (1995) reported that colleges suffer from a serious design flaw in structure, which prohibits any increase in productivity without the risk of diminishing the quality of the product. Productivity is defined as cost per hour of instruction per student (Barr & Tagg, 1995). In this view, the very quality of teaching and learning is threatened by any increase in the student-to-faculty ratio (Barr & Tagg, 1995). With the majority of faculty who are teaching being part-time or on yearly contracts versus full-time and tenure track, the challenges for quality practices continue (McNair & Albertine, 2012).

Defining Cost

Under the “Learning Paradigm”, Barr and Tagg (1995) noted that productivity is redefined as the cost per unit of learning per student. Under this new definition, however, it is possible to increase outcomes without increasing costs. Barr and Tagg’s (1995) findings support that alternatives to the traditional semester-length and classroom-based lecture methods produce more learning. Some of these alternatives are less expensive; many produce more learning for the same cost (Barr & Tagg, 1995). Under this paradigm, producing more with less becomes possible because the ‘more’ that is being produced is learning and not hours of instruction; productivity, in this sense, cannot even be measured in the “Instruction Paradigm” because all that exists is a measure of exposure to instruction (Barr & Tagg, 1995).

The reason for this lack of outcomes knowledge is profoundly simple: under the “Instruction Paradigm”, student outcomes are simply irrelevant to the successful functioning and funding of a college (Barr & Tagg, 1995). The faculty evaluation systems, for example, evaluate the performance of faculty in teaching terms, not learning terms. An instructor is typically evaluated by peers or a dean on the basis of whether lectures are organized, whether the appropriate material is covered, whether interest in and understanding of the subject matter is shown, whether preparation for class is demonstrated, and whether respect for students' needs is obvious (Barr & Tagg). All these factors evaluate the instructor's performance in teaching terms, and they do not raise the issue of whether students are learning, let alone demand evidence of learning or provide for its reward (Barr & Tagg).

Institutional leaders may protest that HIPS are labor-intensive and therefore costly, still concerns about cost need to be addressed in a larger context (Kuh, 2008). In our demanding, increasingly competitive global environment, the quality of learning has become our most important societal resource (Kuh, 2008). According to Kuh (2008), if students leave college without the preparation they need, the long-term cost to them and to our society will be devastating. Conversely, if HIPS support both student persistence and heightened achievement on essential learning outcomes, then leaders will find the monies to make them a top priority (Kuh, 2008).

High-Impact Practices – An Example

Descriptions of high-impact educational practices are provided from an associate in applied business degree program (OUC, 2017). The program coordinator’s high-impact practices demonstrate limits to inclusion yet show measurable productivity in practices that can be implemented at low or no cost. This example, from this author’s experience as an associate professor and program coordinator for a program in applied business, demonstrates the costs and balances necessary to put these educational practices into place on a regional campus of a public university. It should be noted that this program employs one full-time, tenured associate professor, one retired 1/3 option professor emeritus, and five part-time instructors (OUC, 2017).

Mentoring is an important factor for student support. This program utilizes first-year experiences such as an entry/exit seminar offered in the fall; students in this course experience class time with graduating students (OUC, 2017). These experiences promote a mentoring environment where, among many interactions, the entry students present career research and exit students share capstone projects to the combined group. Topics of a small and large scale were discussed, students volunteered in the community, and field trips to large businesses occurred in three of the last four years. Faculty from baccalaureate programs and career services staff have

spoken to the class on topics of furthering their education and career preparation (OUC, 2017). Many programs see the value in mentoring. Mentoring from multiple levels has been shown to allow STEM undergraduate majors to excel in their programs leading to increased retention and graduation rates (Wilson, Holmes, deGravelles, Sylvain, Batiste, Johnson, McGuire, Pang, & Warner, 2011).

Another example of high-impact assessment is the program's practicum option and internship requirement (OUC, 2017). Students in the major who desire a job shadowing experience or the opportunity to work with a professional in the community for a course project enroll in the optional practicum course. Student interns apply for positions in the community with the opportunity to apply learned skills in a working environment. Application of learned skills leading to assessment by the employer is the key to this required practice (OUC, 2017).

External certification assessments from organizations outside of the university offer the perfect example of the impact of cost to this program (OUC, 2017). Students study Microsoft Office productivity applications. The materials for the course are aligned with preparation for the Microsoft Office Specialist (MOS) certifications in five areas (Microsoft, 2015). Practice test and certification exam licenses cost thousands of dollars and are outside of the program's yearly budget. In the past, the campus budget has allowed for the purchase of licenses. Today, the budget cannot stretch for this purchase and the alternatives under consideration are course fees, coordination with local vocational programs, and exploration of the campus as a regional testing center (OUC, 2017). Since the testing center option would incorporate testing in many areas and certification of the campus as a site, this has required input from multiple parties outside of the original program. An investment of time and likely dollars is necessary at this step. Currently, students are encouraged to seek testing sites at their personal expense (OUC, 2017). Similarly, nursing programs are seeking partnerships with healthcare organizations to minimize the cost of NCLEX-RN testing and repeat testing (Roa, Shipman, Hooten, & Carter, 2011). The completion agenda will continue to drive this issue towards a solution.

A crucial element beyond these costs, examples, and recommendations is each faculty member's personal motivation to provide an educational experience for all students that will inspire creativity, stimulate problem solving, and foster a level of engagement that transcends the classroom and fosters lifelong learning (McNair & Albertine, 2012). The development and delivery of high-quality high-impact practices and subsequent assessments is dependent upon both institutional support and faculty willingness.

Discussion

Various perspectives on the assessment movement and learning versus instruction must be understood and implemented in a cost-effective manner (Barr & Tagg, 1995). While this movement has been under way for at least a decade, it has not infiltrated into normal practice due to the dominance of the lecture-based practice especially in the science classrooms (Barr & Tagg, 1995; Tanner & Allen, 2004). Only a few colleges across the country systematically assess student learning outcomes; however, educators in California community colleges have learned that 45 percent of first-time fall students did not return in the spring with many students averaging six years to earn an associate degree (Barr & Tagg, 1995). DeAngelo, Franke, Hurtado, Pryor, and Tran (2011) studied completion rates for first-time, full-time students at four-year institutions and found that less than four out of every ten students (38.9 percent) were completing a degree in four years of college. As the likelihood of degree completion begins to diminish, only 56.4 percent of

students finish in five years and 61.2 percent earn a bachelor's degree after six years (DeAngelo, et al., 2011). Considering these numbers, should lecture-based practice continue?

Many institutions construe teaching almost entirely in terms of lecturing (Barr & Tagg, 1995). A true story makes the point:

A biology instructor was experimenting with collaborative methods of instruction in his beginning biology classes. One day his dean came for a site visit, slipping into the back of the room. The room was a hubbub of activity. Students were discussing material enthusiastically in small groups spread out across the room; the instructor would observe each group for a few minutes, sometimes making a comment, sometimes just nodding approval. After 15 minutes or so the dean approached the instructor and said, "I came today to do your evaluation. I'll come back another time when you're teaching" (p. 20).

Exploration into why these types of practices are effective and which students have access to them emphasizes the need for the investment into high-impact practices including spreading the message, as the mandates from the U.S. government's "completion agenda" are geared toward preparing America's workforce (United States Department of Education, 2011).

The Completion Agenda

Former President Obama's *American Graduation Initiative* and 2020 college degree completion agenda focused on building a more highly-skilled and productive workforce; more students completing a college degree in four years or less was the proposed method to meet his goal (United States Department of Education, 2011). In 2013, the national on-time completion rate was at 19 percent for students seeking four-year degrees, and state governments along with other organizations became more involved (Complete College America, 2013).

In April 2010, the American Association of Community Colleges (AACC) joined with five other national organizations to express a shared commitment to student completion (Ohio Higher Ed, 2015). These partner organizations (the Association for Community College Trustees, the Center for Community College Student Engagement, the League for Innovation in the Community College, the National Institute for Staff and Organizational Development, and the Phi Theta Kappa Honor Society) participated in an unprecedented joint-signing ceremony that committed the organizations to assisting members in producing 50 percent more students with high-quality degrees and certificates by 2020 (Ohio Higher Ed, 2015). It is time to expand this commitment beyond our organizations to our campuses (McPhail, 2011).

This agenda is further emphasized in the state of Ohio where the Board of Regents has implemented College Credit Plus and other initiatives. College Credit Plus provides students from sixth to twelfth grade the opportunity to earn college credits while completing high school credits at the same time (Ohio Higher Ed, 2015). The Complete College Ohio Task Force Report & Recommendations paper identified an array of policies, practices, and programs for improving students' college readiness, reducing the time it takes for students to attain a certificate or degree, and incentivizing progress and completion (Ohio Higher Ed, 2015).

Policies aimed at encouraging institutions to produce more graduates by creating a funding model to encourage on-time graduation are described as performance-based funding (Hillman, Tandberg, & Fryar, 2015). In 2007, Washington implemented the Student Achievement Initiative, which was a statewide performance accountability system designed to improve retention and

degree attainment for community colleges (Hillman, Tandberg, & Fryar, 2015). In the end, this emphasis on completion and attainment must also include HIPS as part of budgetary and academic decision making and certainly not hinder these practices with budget constraints.

The Professorial Viewpoint – Outcomes and Assessment

From this professor's viewpoint, full-time faculty are the primary decision makers in the development of course materials, and they have research means to determine outcomes and the implementation of assessment. The establishment of learning outcomes and a matching, measurable assessment is the key to understanding the need for active learning and high-impact educational practices involving assessment beyond the traditional objective, multiple-choice examination. The following is a description of the development of outcomes, assessments in practice, and faculty development from this viewpoint.

Development of outcomes. In brief, developing program outcomes and subsequently course outcomes is an evidenced-based process requiring expert input. Appropriate verbs are chosen from a theoretical approach to delineate the level of expectation of learning outcomes based on best practice evidence. Standards are used for the selection of the appropriate verbs to match levels of learning. The most important part of this course development process is the selection of activities, assignments, and assessments that match these verbs. Often a standard test or exam does not match the expectation as set by the verb and does not fully assess student learning. This is the point where faculty must wisely implement HIPS and assessments.

Assessment in practice. In practice, writing across the curriculum including the opportunity for undergraduate students to conduct relevant research is often overlooked when describing assessment even if it is implemented. When asked how they assess students, professors reply that a midterm and final examination are their primary tools without giving proper weight to other assignments such as research, portfolios, and other written works. The professor may make a writing assignment without giving it the rigor required for research excellence that will prepare the student for future writing. This rigor could include collaboration with other students, interviewing within the community, understanding of writing standards for formatting, and presentation of findings. In this example, writing does not appear to require much in the way of training, but the commitment of time is evident.

Barr and Tagg (1995) reported locating professors, commissions, and task forces who lacked vision, and they witnessed these reformers advocate for many of the new "Learning Paradigms" yet only a few of them were widely adopted. The reason is that they have been applied sparsely within the structures of a dominant paradigm that rejects or distorts them, thus the efforts have often failed (Barr & Tagg, 1995). For example, if students are not learning to solve problems or think critically, the old logic, according to Barr and Tagg dictated faculty must teach a class in creative thinking and make it a general education requirement for degree completion (Barr & Tagg, 1995). The logic is all too circular: What students are learning in the classroom does not address their needs or that of the community; therefore, faculty could bring them back into another classroom and instruct them some more (Barr & Tagg, 1995). The result is never what faculty hope for as a student learning outcome. Richard Paul, director of the Center for Critical Thinking stated that critical thinking is taught in the same way that other courses have traditionally been taught, which is with an excess of lecture and insufficient time for practice (Barr & Tagg, 1995). It is time for professorial buy-in to the "new logic" and change.

Faculty Development. For implementation of high-impact practices to spread, faculty members need development and encouragement to make changes in the classroom, they need the resources to obtain the right tools and environment for developing these practices (McNair & Albertine, 2012). Currently, the majority of faculty are teaching part-time or are on yearly contracts, which presents challenges (McNair & Albertine). However, faculty innovators are at work across all types of colleges and universities. According to research by McNair and Albertine (2012), professional development opportunities introduce faculty (full-time and part-time) to high-impact practices, assessments, and course designs as well as individual faculty mentoring for collaborative teaching. Faculty reward structures that support innovation in the classroom, including the use of technology to facilitate collaboration, are essential elements (McNair & Albertine, 2012). Professional development may also encourage partnerships between staff and faculty across disciplines to promote curricular and co-curricular learning throughout a student's educational experience (McNair & Albertine, 2012).

A crucial element beyond these recommendations is each faculty member's personal motivation to provide an educational experience for all students that will inspire creativity, stimulate problem solving, and foster a level of engagement that transcends the classroom to foster lifelong learning (McNair & Albertine, 2012). The development and delivery of high-quality, high-impact practices depends on both institutional support and faculty dedication. Motivation must come from multiple sources to enrich the professorial viewpoint. This begins with a supportive budget.

Managing the Costs - Budgets That Meet Program Level Learning Outcomes – Solutions

Preparing tomorrow's workforce is at the forefront of the completion agenda and HIPs can be the key link to providing assessments that ensure preparedness. However, it is easy to see the need for time, money, and innovative practice designs as asserted in these five elements described by Kuh (2008). First, HIPS demand that students devote considerable time and effort, which often translates into faculty availability for support. Second, HIPS help students build relationships by interacting with faculty and peers and developing mentor and advisor relationships. Third, HIPS provide students with rich feedback from supervisors including faculty, internship site supervisors, staff, and community members. Fourth, HIPS help students apply and test what they have learned (e.g. internships). Finally, HIPS provide opportunities for students to reflect in order to understand themselves and the world (Texas A&M, 2015).

The first solution to the costs involved in implementing high-impact educational practices and assessments is to realize the value in making the investment. Program faculty leaders could continue to provide evidence to administration in support of practices with proven student successes in an effort to maximize budget dollars. According to Barr and Tagg (1995), it would make more sense to fund a college on the number of math problems students solve, for example, than to fund it on the number of students who sit in math classes. It is suspected that any system of institutional incentives based on outcomes would lead to greater learning than any system of incentives based on inputs (Barr & Tagg).

Learning outcomes include whatever students learn and do as a result of a learning experience. Any measurement of a student's work from an educational experience is a measure of a learning outcome (Barr & Tagg, 1995). Barr and Tagg (1995) agreed that we could count the number of pages students write, the number of books they read, their number of hours at the computer, or the number of math problems they solve, but new forms of assessment should focus

on establishing what college and university graduates have learned, the knowledge and skill levels they have achieved, and their potential for further independent learning. One such example might be a hybrid, flexible model delivered using a combination of face-to-face seminars and electronic delivery to improve students learning in accounting programs (Dowling, Godfrey, & Gyles, 2003).

Solutions in Practice

A few examples of actual costs and possible money saving strategies are found in the previous example from the two-year degree applied business program. In this associate degree program, first-year seminars and experiences include research. Students conducting research with faculty and group collaborations occurred only twice in a five-year period, fortunately with both resulting in conference presentations. However, faculty absorbed the travel cost personally. The program's budget covered students' conference fees at an average of \$50 per student. Compare this to the entry and exit student seminars where field trips to tour employer facilities came at a cost of \$126 per trip (transportation expenses to the university). Groups were kept small to fit the university van and the faculty pocketbook, as food was provided personally by faculty. Additionally, the employer has an investment of salaries to employees who offer the tours to students and who are unproductive during that time. The student investment in time and expenses outside of the classroom (possible loss of work hours or childcare costs) should also be considered.

Common intellectual experiences and learning communities. Stipends can be offered for faculty involved in the development of learning communities. At the minimum cost, these begin at \$500 per design at the aforementioned university. Similarly, in the associate degree program example, interdisciplinary course opportunities are offered and require additional investment of time for faculty. Faculty spend time in research, practice, and publication opportunities to prepare and inform their teaching; however, no stipend for this work is currently available.

Writing across the curriculum. Writing intensive courses in the associate degree program example included writing across the curriculum in a variety of ways. For example, students communicate with output from learned software applications. The university provided production software for students to communicate via documents, spreadsheets, presentations, diagrams, desktop publications, and email. A reduced rate for education institutions is provided by the vendor with constraints on the licenses and regular renewal requirements.

Projects and collaborative assignments. No measurable cost options for collaborative assignments and projects existed in this program. Projects throughout the curriculum provided additional opportunities for students to engage in groups and with the community. However, hidden costs to students seeking community involvement as well as library materials costs are a factor. One solution to the high cost of materials for a particular course in medical coding was the combination of the course with a practicum experience. This allowed the student to use materials provided by the practicum placement facility in conjunction with a mentor to aid in the understanding of the coding in practice.

Diversity and global learning. In addressing opportunities for diversity and global learning, the program offered an option in the general education requirement of communications studies. Currently, students in this program can substitute a general education course in public speaking for a cross-culture communications course from the same department. Other core courses have learning outcomes to address diversity and international, global perspectives as related to teleconferencing, business, and ethics. Assessment practices for these core courses includes expert interviews, facility tours, and projects. Vitally important to the success of diversity and global

learning for this program was the students being able to access student clubs, university activities, and most importantly a diverse faculty.

Service learning, practicums, and internships. Practicums and internships can vary as to personal costs to students and faculty (site visits). With coordination from the faculty and career support staff, employers and students often receive grant dollars to support their efforts. For this program capstone courses and projects are addressed as previously mentioned in an entry and exit seminar format. Students create non-linear portfolios of their degree program coursework and experiences. These projects are presented to the class and prepared for publication to future degree programs or employers. No formal service learning experience is provided by this degree program.

A Final Argument for Inclusion of High-Impact Educational Practices

Arguments for inclusion of certification preparation, workforce preparedness through internships, and project-based assessments are explained below with the emphasis on how these approaches provide continuous feedback to students. An example of a university strategic plan explains implementation requirements. Having credible external certification testing preparation is crucial for technical programs offering a heavily weighted applications-based curriculum. Microsoft, Cisco, and Jupiter Networks rank among the top certifications required by employers for 2016 based on a survey of job postings (Tittel, 2015). Employment preparation is a driving factor for many associate degree trained students. In a 2008 national survey, employers rate less than 40 percent of workers as “well prepared” in the areas of global knowledge, self-direction, writing, critical thinking, adaptability, self-knowledge, oral communication, quantitative reasoning, social responsibility, intercultural skills, ethical judgement, and teamwork (Kuh, 2008).

Practicums and internships provide a measure to employers of student learning on the job. The privilege of shadowing and learning skills on the job provided by practicum experiences for technical programs, human services programs, and others demonstrates how these practices are essential to student success, during and after completing their programs of study. Networking in this highly-competitive job market is often overlooked, and practicums and internships provide this essential contact. In addition, the projects completed by student interns provide the evidence site supervisors/employers need to write those letters of recommendation. However, student access, especially students in two-year programs, to paid internships is minimal and expenses quickly accumulate. Transportation costs, clothing, and meals can eliminate the opportunity for many students. Programs that seek grant monies and employer/university relationships can lead to paid positions for associate degree students that might not otherwise be an option.

High-impact educational practices offer both course and program level learning outcomes’ assessments including equally vital student projects, portfolios, and service learning opportunities, which can be costly in both time and money. Transportation to community projects assignments as part of a first-year seminar experience can again be costly. Software programs and materials for projects, portfolios, and e-portfolios need to be current and effective as well. Providing on-campus opportunities for students to give back is one of the most cost-effective methods of achieving the service goal. Combining efforts with other technical programs and university-wide IT departments is a great way to get access to current applications without a direct expense to a small associate degree program budget. Capstone projects using these applications can be presented to fellow students, potential employers, and future degree programs at little or no cost to students or their program.

The importance of all of these practices is best explained as providing continuous feedback to students. Even though the structures and settings of high-impact activities differ, students typically get frequent feedback about their performance in every one of these options. Working with a faculty member on research, having a paper checked by a peer writing tutor prior to turning it in, and having one's performance evaluated by the internship supervisor are all rich with opportunities for immediate formal and informal feedback (Kuh, 2008). Because students work in close proximity to supervisors or peers, feedback is almost continuous. In addition, a National Survey of Student Engagement in 2007 provided results showing that students who receive feedback during or after working on a research project with a faculty member are more likely to report that their relationships with faculty are friendly or supportive (Kuh, 2008).

At Utah's Snow College, their strategic plan defined quality as teaching and administrative practices that are valued by advancement and the tenure process, affirmed through assessment, and aligned with discipline-specific standards established by accrediting bodies (Allred, Gridley, Larsen, & Mathie, 2013). Quality instruction is emphasized along with supporting student services with the investment of resources; they must continually reassess the ways in which they ensure quality (Allred, et al., 2013).

The faculty who wrote the strategic plan at Snow College expressed concerns with the shift from full-time, tenure track faculty positions to part-time positions, and recognized that to enable faculty efforts workload would need to be revised (Allred, et al., 2013). Other elements of high-impact practices in Snow College's plan included possible changes to general education, including interdisciplinary and perhaps team-taught courses, as well as the implementation of high-impact practices requiring investments of faculty time and collaboration with student support staff (Allred, et al., 2013). The plan endorsed funds for faculty to pursue terminal degrees, receive sabbaticals, and to work on summer projects designed to support the development of degree programs in strategic areas. These final words support the need for implementation by stressing that faculty should be encouraged to make use of proven educational technologies (Allred et al., 2013). Snow College administrators committed to continue to weigh the benefits versus the costs of high-impact educational practices.

Conclusions

Bresciani (2015) stated that faculty do not have to assess everything every year; it is not necessary to do everything at once. One recommendation is to start with two or three learning outcomes, be flexible, and acknowledge the successful outcomes at the level of quality balanced with effectiveness (Bresciani, 2015). Other recommendations by Bresciani include the recognition of what already worked well in the classroom and the provision of assessment expertise to help faculty evaluate a program more effectively (Bresciani, 2015).

Although a goal, based on best practices and research, may be to attain levels of student learning that can prepare them for achievement on licensure and certification tests as a logical next step after graduation, the actual goal should not be to have these outside entities evaluate a university degree program. Providing expensive testing even with the support of course fees or as part of a program's budget may often be impossible and even beyond the intended scope of the university's budget for programs. Borrow examples from other institutions to modify as appropriate and partner with other institutions in the community for optimal use of budget monies. Time for implementation of high-impact educational practices and assessments must be re-allocated as well. Faculty allocate time according to values and priorities. To coordinate external

testing for a program may not be the best use of faculty time; however, improving and expanding assessment options is crucial to reaching the outcomes desired for students.

In summary, program faculty leaders should continue to provide evidence to administration in support of practices with proven student success in an effort to maximize budget dollars. Working with other programs to share materials and achieve outcomes through learning communities achieves the goal for students with little or no cost. Researching grant programs for funding and working with business and community leaders to support university initiatives for assessment can provide excellent funding while also serving the community needs.

Wide-scale implementation has the potential to foster significant change and improve student success, while making excellence inclusive (McNair & Albertine, 2012). Budget constraints and buy-in issues from faculty can limit the numbers of students involved in high-impact educational practices. The time has come for higher education institutions and their faculty to make participating in high-impact activities a reality and a priority for every student.

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Embracing Vulnerability and Risk in the Classroom: The Four-Folder Approach to Discussion-Based Community Learning

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Abstract: In recognition of various power systems within and surrounding their classrooms, U.S. women's studies instructors have for several decades worked to reconfigure the college classroom as an environment that enables all students to speak, thus creating empowered communities and ultimately inspiring the next generation of leaders. As some of the most repeated mantras of feminist pedagogy, these educational goals embody the liberating power of feminist theory and practice. The pedagogical practices employed in attaining these goals typically value experiential knowledge and encourage students to be attuned to various forms of speech and knowledge construction, which are framed through a politics of power and difference. As part of an ongoing conversation about the perils of cooperative learning, independent problem-solving, and peer leadership in higher education, this reflective essay describes one strategy, which I call the four-folder system. This instructional strategy troubles the promises of safety and implied instructor surveillance that so many feminist instructors adhere to, while simultaneously creating a multi-vocal learning environment. The techniques and rationale described may be applied to a range of courses and are not necessarily bound to introductory women's studies surveys. I propose that given favorable conditions, embracing vulnerability and risk in the classroom better frees our students from the confines of conventional pedagogies used in higher education.

Keywords: course design, safe space, peer leader, women

As feminist theory and practice continues to inspire women's instructors to value experiential knowledge and encourage students to grow attuned to the politics of power and difference, faculty often proclaim their classrooms to be "safe spaces," which refers broadly to environments where participants can express themselves freely (however provocative, painful, or personal that sharing might be) without fear of judgment or other harm. However, the assumptions underlying this so-called safety are false promises, and the rhetoric remains problematic because it primarily protects the interests of those who already possess a considerable amount of privilege in the classroom, and can aggravate existing power inequities among students, despite the instructor's intentions. As part of an ongoing conversation about risk in higher education classrooms, this article presents a strategy that embraces the inevitable perils of cooperative learning, independent problem-solving, and peer leadership. This strategy, which I call *the four-folder system*, resists the notions of safety and implied instructor surveillance that so many feminist instructors promise, while simultaneously creating pedagogical space in which multiple voices may respectfully exchange ideas and experiences.

The four-folder experiment responded to a particular dilemma: how do I create a democratic learning community, given the existing power inequities in my classroom? My

response was to redesign my syllabus around a physical object: a two-pocket paper folder. Four folders strategically placed in the outer four corners of my classroom transforms a thirty-person roster into four flexible discussion groups. Inside, each folder contains activity instructions, grading rubrics, questions, answers, and memories from previous discussion sessions. Each folder is a tangible metaphor for the semester-long activity. It binds students together, is owned by the group, and is personalized with the names of each group member tattooed on the cover.

Although this essay focuses on the introductory women's studies elective, the techniques and rationale described here may be applied to courses in other departments. The article begins with a brief contextualization of the wide-spread adoption of safety rhetoric in its relation to student empowerment in feminist pedagogy, including a discussion of shortcomings, and an acknowledgment of how scholars are already addressing these issues. This background is followed by a case study drawn from my own teaching of an introductory women's studies class at a large southern research institution. The outline of my objectives, course design, and implementation of the four-folder system foregrounds how a politics of vulnerability primes students to treat weekly peer-led discussions as high-stakes exercises: students confront the risks of feminist inquiry and self-disclosure instead of hiding behind the guise of safety. I follow this section with a series of proposed lesson variations demonstrating the flexibility of the four-folder system, and reflect on how feedback from students and colleagues necessitates continual revisions in order to meet our students' needs. This essay will not directly compare or rank pedagogical tactics, but rather, introduces a method-in-progress that can potentially transform classroom spaces, sounds, and practices. I conclude that given favorable conditions such as those enabled by the four-folder system, embracing vulnerability and risk in the classroom better frees our students from the confines of conventional pedagogies used in higher education.

The Logic of Safety in Feminist Pedagogy

American feminist pedagogy evolved from the entanglement of second wave social activism and consciousness-raising groups during the 1960s, and the institutionalization of women's studies as an academic discipline in the 1970s. The women's studies university classroom emerged as a site of refuge for feminists and members of other oppressed groups who valued women's societal contributions and shared an intellectual need to probe social justice issues. Women's studies students learned how to critically read and debate cultural artifacts, and how to develop theoretical frameworks that would untangle the intricate knots of gender, race, sexuality, and other class identifiers by which we are all bound. Feminist pedagogues were first concerned with developing a vocabulary and praxis with which to discuss women's individual and collective experiences, which partly explains why these teachers were particularly receptive to students sharing personal stories (the personal is political) in the legitimization of subjectivity and the confirmation of self-knowledge (Crabtree & Sapp, 2009; Bunch, 1983).

It was clear to feminist professors that data transmission was neither the only, nor necessarily the most important, process that occurred in the classroom. Instead, a stronger emphasis was placed on holistic student development (critical self-examination, reflexivity, and leadership), and the transformative power of language (written and verbal debate, analysis, and other forms of creative expression). Interrogating the history and politics of the American academy led many of these scholars to conclude that mainstream college curricula and classroom methods (even those at women's colleges) privileged western male history and universalized male experiences, and were not developed to benefit women (Lorde, 1984; Rich, 1979; Tisdell,

1995). Exploring alternative models, they learned that women and other oppressed groups benefitted more from educational methods emphasizing multidimensional student development and social change instead of competition and rationality (Ibid). Feminist pedagogues drew heavily from postcolonial scholars to address classroom power imbalances, affirming prior arguments about the importance of de-centering the classroom and coaching women to trust their knowledge.

Feminist instructors experimented with methods to cultivate learning environments where all students could contribute to the imparting of knowledge. As Culley (1985) describes, “our admitted histories and contexts, when subjected to examination, can alter the form and content of how we learn and teach. Affirming that we and our students are concrete subjects of the learning process, our model becomes dialectical rather than positivistic” (p.209). Such hopes for collective educational investing led feminist pedagogues back to consciousness-raising models, what bell hooks and others envisioned as communities where women unite around honest expressions of love, anger, fear, and hope (hooks, 2003). Shrewsbury’s (1987) descriptions of “democratic learning” suggested that the ideal feminist environment would be attained when “members of the class develop a community, a sense of shared purpose, a set of skills for accomplishing that purpose, and leadership skills so that teacher and student may jointly proceed on those tasks” (p.6). In Shrewsbury’s vision (1987), sharing decision-making power with our students will lead to personal and community empowerment that ultimately imprints onto other domains of students’ lives. Such manifestos propelled feminist teachers to reconfigure an intellectual domain that was founded on patriarchal premises.

It is understandable why safety logic, in which free speech and confidentiality are implied, became so enticing to feminist pedagogues. When professors exert every mental muscle fighting against the intellectual passivity to which women and girls have been socialized, coaching them “to occupy space... to think independently, to take intellectual risks, to assert ourselves mentally” (Rich, 1979, p.41), instructors naturally desire to nurture the ideas that students put forth, even if they are perilous to feminist principles. Here enters the dilemma of the women’s studies instructor: how can we empower our students if we must safeguard them from each other? A flaw with the democratic learning model is that it assumes that the classroom operates with a flat distribution of power; that our students do not dominate each other; that they naturally respect their instructor; and that students come to the classroom wanting to be anti-sexist. But veterans of introductory women’s courses know this is not always true.

In wrestling with this dilemma, Berenice Fisher (2001) questions whether safety is not actually a goal but rather a tactic that suppresses conflict in classrooms where teachers and students discuss personal experiences and feelings (p.137). Because it is assumed that all commentary is well-meant, ignorant and/or hurtful statements are too often excused by the instructor in safe classrooms (Winkler & DiPalma, 1999). In *Talking Back*, bell hooks (1989) reveals the degree to which “safety” is a feminist stereotype, and argues that we should model dialogic spaces that prepare our students for the real world by empowering them to “come to voice in an atmosphere of risk” (p.53). Ideal as it may be, there are no truly safe spaces in or outside of the classroom, nor ought that be the ultimate goal for feminist pedagogues. A new goal of student accountability better aligns with bell hooks’ (2014) “atmosphere of risk” and Jeannie Ludlow’s (2004) “contested space” model, wherein “we know that no space is free from domination, so we examine the effects of power and privilege in our classroom environment,” and redesign courses to respond to existing inequities.

A Dilemma in Introductory Women's Studies Courses

Instructors of introductory women's studies courses find themselves in a perplexing situation: there is a constant tension between the theoretical postulations that they teach and the pedagogical methods upon which they rely. Legitimizing women's studies as an intellectually rigorous field within the academy necessitates conforming to institutional practices, which limits the possibilities for a decentralized instructional model. Restrictions to be negotiated include the semester schedule, pervasive over-valuing of quantitative assessment, even the architectural design of our classrooms challenges the egalitarian and exploratory development that women's studies theoretically champions. The sheer inevitability of assigning final grades prevents instructors from ever fully relinquishing their classroom authority, which is one of many reasons why feminist professors frequently admit that they struggle to realize the promises of feminist pedagogy (Brown, 1997). The four-folder approach does not dodge this dilemma; indeed, its very structure reflects my generous attempts to manipulate an existing framework in order to improve instruction quality.

Addressing Student Needs: Foundations for the Four-Folder System

The four-folder system arose from the specific context of a four-year period (2010-2014) during which I taught fourteen sections of a 2000-level Introductory Women's Studies course. I worked primarily with first-year students, a surprising number of whom voiced concerns about taking my class due to their presuppositions about how the field countered their conservative political and/or religious beliefs.¹ Having entered into this ideologically dissonant space, I redesigned my syllabus around self-discovery and collaborative learning models that I hoped would de-escalate existing student-teacher tension and encourage students to self-examine their attitudes and values. Unlike my colleagues from the sciences whose introductory courses serve as prerequisites for qualifying exams and upper division classes, few of my students would enter into the academic or community activist field of women's studies. This freed me to tailor course content to the needs of each section. Should one class express excitement or confusion about a specific subject, I could revise the syllabus to meet that need. On the other hand, because the majority of my students would never take another women's studies course, I felt an immense pressure to cover the entire textbook anthology and expose them to as many revolutionary texts and historical figures as possible, regardless of how well they might comprehend or reconcile that literature. Confronted with the tension of these two realities, I questioned the very purpose of this class: Am I to prioritize breadth or depth, and what should be the most important learning outcome?² Deliberate and thoughtful course planning was necessary, as were specific techniques to overcome disparities in college preparation among my students. My need to redistribute the power wielded by dominant students inspired the four-folder system to provide the structure my students needed to be successful, without sacrificing the instructional flexibility that I expect from women's studies courses.

I organized my introductory course into four equal-length thematic modules, each with a nearly-identical ordering of assignments (see fig. 1). Each week began with lectures and full-class

¹ All names in this article have been replaced with pseudonyms or are fictionalized composite descriptions in order to protect the identities of my students.

² If, as Rich (1979) claims, our most important goals are empowering students with the critical thinking and problem solving skills necessary to become independent life-long learners, and if we value listening and communication skills so that our students can better assess opposing viewpoints and reach informed stances on contemporary debates, then introductory women's studies instructors ought to structure their courses around these objectives; a modified "backwards design" in the vein of L. Dee Fink (2003).

instructor-led discussions that introduced theories and vocabulary related to the topic.³ Subsequent reading and other homework assignments reinforced that content, which students then applied during peer discussions when they returned to class. On discussion days, students were separated into four small teams that simultaneously discussed the readings. I followed up on these student-led discussion sessions at the end of the week, using my Friday lecture time as a full-class debriefing that contextualized their group work and pushed their analysis of the content to a more advanced stage.⁴ We repeated the process upon returning the next week. Assignment repetition in this modulated course design instilled a sense of security for many students, but more importantly, freed them to focus their energy on the content at hand.

In-class	Monday Lecture Introduce vocabulary, theories, and history; Model analysis and discussion of text		Wednesday Peer-Discussion Three student-led team discussions; Full-class disclosure; Brief peer assessment		Friday Synthesis Debriefing; Guest speaker, or film excerpt; Instructor-led discussion of anthology text; Review	
Out-of-class		Homework: Read 3 assigned articles from anthology; Assigned discussion-leaders electronically submit summary, discussion questions, and responses; Revise work as needed		Homework: Reflective journal entry that relates to peer-discussion; Read 1 assigned article from anthology; Study as needed		Homework: Read 1 assigned article from anthology; Work on individual or group project(s) as needed

Figure 1. Weekly class structure. “Castle top” graph design borrowed from Fink (2003).

Doubts and Decrees

“My instructor always did a good job of listening to our opinions, even when they differed from the ones she had. Everyone also had a chance to speak and every single person was always treated with the same respect and appreciation; this is something that is not present in many classes I have taken before.” – end-of-semester student reflection.

Women’s studies instructors typically establish a set of guidelines to regulate student behavior before class discussions. But the manner of creating these rules can be more important than the resulting laws, and in relation to the four-folder system, this stage marked an important first step in the decentering process. My classes read a series of articles about the purpose of a

³ This orientation provides students with tools for success that they may implement during independent discussions. In addition to a theoretical introduction, I also cover leadership and conflict management strategies. See Warren (2000) and Weber Cannon (1990).

⁴ I have conducted the four-folder method with classes that meet two or three times per week and found that it worked equally well with either format. For simplicity, this article only describes the implementation for a class that meets three days per week.

women's studies education, then discussed the lingering need for women's studies on college campuses and the challenges that these courses pose. To a certain degree, my students already knew the classroom to be a risky place, and I used this pre-knowledge as the basis for an activity that I called "Doubts and Decrees." Students were first asked to create a "doubts" idea map that predicted potential hazards of women's studies-themed student-led discussions. These idea maps generally highlighted the following fears:

Other students will:

- come unprepared
- not listen
- judge
- misunderstand
- devalue my opinion
- lack maturity
- dominate conversations
- disinvest from the task
- argue and fight
- not trust me

Students rarely disagreed with the items on this list because they recalled these fears from prior class experiences (which is how this activity primes students to trust the subjective truths of their peers). Usually absent from these lists were accounts of race, class, gender, sexuality, etc., that were likely to be at the crux of discussion disputes, so I seized upon this as an opportunity to shift the class' attention to these unspoken power systems. "Why do these problems manifest?" I ask, which serves the basis for a second "decrees" idea map of strategies to confront said doubts.⁵ Perhaps unsurprisingly, students across all sections of my introductory classes arrived at similar decrees, which included some combination of the following items:

All students must:

- come prepared
- listen closely
- engage in dialogue
- ask questions
- be encouraging
- not interrupt
- be mature
- refrain from slurs, stereotypes, and intentionally hurtful remarks
- not force the disclosure of personal information
- hold each other accountable for our words
- seek a deeper understanding of the subject
- remain focused on women

⁵ This activity was inspired by Weber Cannon (1990) and Ludlow (2004). Unlike Ludlow's instructor-mandated list, my interpretation of the assignment is student-driven. And unlike Weber Cannon's ground rules, it is anticipated that my students will not always follow the rules generated by their idea maps.

The doubts and decrees activity frames peer discussions as an environment with easily identifiable risks. My students invariably replicated rules advocated by proponents of “safe” women’s studies classrooms, but such lists fall short of challenging power disparities that make peer discussions unsafe undertakings for students who inhabit marginalized identities.

To their lists I added a simplified version of Weber Canon’s (1990) discussion ground rule: “acknowledge the existence of sexism, racism, heterosexism, elitism, ageism, ableism, and eurocentrism, however differently we each experience these systemic and institutionalized systems of power,” (p.126) in order to remind us all of the governing structures that be. But this is a tall order, so I clued students to be mindful of how power and privilege often manifest in peer discussions. I warned my classes about feeling-based statements such as “I believe” that often lead students to interpret opposing beliefs or critiques as personal attacks. I advised students to be mindful of how we embed our race, class, gender, sexual, ethnic, religious, generational, national, etc. identities in explanatory “I” and accusatory “You” possessive pronouns. My predictions reinforced a common theme about how our perception and reactions stem from our identities and social positions. I then segued to my own set of discussion rules, a two-stage discussion progression that guides students from concrete to more abstract information.⁶

- Stage 1: Students are first required to reach a consensus about the author’s stance (who is she, what is she saying, what is the context, and why is this important in the context of our class?) before;
- Stage 2: Engage with each other’s interpretations (I think), judgments (I do/don’t agree) and life stories (when I), as a means to connect new knowledge to their own prior knowledge and experiences.

I bound their doubts and decrees inside discussion folders (later described in detail) as a reminder to expect conflict as well as accountability in each stage, and to realize that not all ideas have a proper place during our discussions.⁷ These decrees were inevitably broken, but despite growing evidence that discussion rules are ineffective at regulating student behavior (Sensoy & DiAngelo, 2014; Ludlow, 2004), the very act of creating them was an important developmental step towards self-governance. The rules existed to draw attention to problems, not solve them.

Strategic Separation

“I am shy, so being able to speak out to only a handful of people was very helpful to me and allowed me to participate comfortably, so it helped me to understand the concepts that we were learning.” – end-of-semester student reflection.

Within classrooms we each navigate shifting positions of power relative to the subjects who surround us. Given that it is impossible to eliminate the social politics at play (Ludlow, 2004; Johnson-Bailey & Lee, 2005), the best outcome is to avoid exaggerating existing problems. Before I assigned students to discussion groups, I closely studied their personalities and social interactions

⁶ Groups are welcome to remain in stage one, which does not imply a less meaningful discussion.

⁷ These rules clarify that students will be accountable for the content and framing of their ideas. The objective is not to silence individuals, but to task them to recognize how ideas are rooted in race, class, gender, ideologies. See Applebaum (2014), and Sensoy & DiAngelo (2014).

in class and through a series of written assignments in which they reflected on their biographies. Strategic separation of students presented opportunities to negotiate power disparities.

I was particularly aware of the placement of minority students who are less likely to feel comfortable in the women's studies classroom in the first place (hooks, 1989) and are more likely to be negatively impacted by instructional activities that emphasize risk. It is not enough to rely on university admissions offices to ensure that our campuses are diverse and inclusive, so faculty must be mindful of situated power and difference when they evaluate and manage their students. Because my classes at this institution were 75%-80% white, I assigned multiple students of color to discussion groups as an attempt to reduce the perceived pressure for these students to act as racial ambassadors or feel obligated to conform to the perspectives of their white peers. Regarding other visible identifiers, I have yet to encounter a women's studies class with more than 10% male students at this institution, which led me to carefully spread out male students and domineering students so that they did not pool their privilege.⁸ Depending on enrollment, each class resulted in four discussion groups of six to eight students.

"I really enjoyed how we had class discussions with small groups. I felt like that allowed me to be much more verbal because you didn't have to say it in front of the entire class. I think I am not only am more aware of women's issues and the way our society works but I also think I'm way better now at reading something and thinking." – end-of-semester student reflection.

The type of temporary and flexible strategic separation described here links a diversity initiative to course learning objectives, but it does not make the classroom safe.⁹ On the contrary, my insistence on diverse discussion groups during four-folder activities increased the likelihood of dissonance and misunderstanding. Risks and accompanying student discomfort from voicing and listening to competing interpretations and life experiences facilitated active learning when students assumed the responsibility of engaging each other, and students recognized improvements in their own discussion skills. One student shared:

"I speak better in public and voice my opinion more. Learned to listen to what others have to say and digest other people's opinions. Very interesting topics. Great environment for discussion." – end-of-semester student reflection.

Gratifying long-term effects from this discussion strategy included increases in my students' ability to engage in difficult conversations that required reading comprehension, listening, and analyzing arguments by their authors, their peers, and themselves.

"Having the same group all year helped us grow together and we were constantly becoming more comfortable working with each other which allowed for better discussions. The articles chosen were also interesting and showed me a different point of view on a lot of things and gave suggestions on how we can combat certain issues." – end-of-semester student reflection.

⁸ The impact of male students in women's studies classes extends beyond the scope of this paper.

⁹ My use of the term "minority students" refers primarily to students of color, but my data collection and strategic separation heightened my attention to the placement of adult learners, LGBTQ-identifying individuals, students with disabilities, international students, and students who identify as working-class.

These academic skills were visible and audible, as the students who once retreated or silenced themselves in the face of conflict grew increasingly accustomed to remaining in the conversation, and those who once snapped back at the mere suspicion of dissent usually found methods of self-restraint. Peer discussions initially sounded like conversational waves that built and crashed into periods of awkward silence, but gradually developed into blocks of loud constant sound.

Student Responsibilities

“I thoroughly enjoyed meeting with my group because we worked very well together. It made it much easier for me to share my own thoughts because the small size was less intimidating than the class as a whole. Creating our own discussion questions helped me focus on the text and also helped me learn the information more effectively.” – end-of-semester student reflection.

Additional structuring of the peer-discussion experience was critical to promote feelings of interdependence and liability for each other’s success (Johnson, Johnson, & Smith, 1991). Before each weekly peer-discussion, the entire class read three short articles from the textbook anthology. These articles were excerpts from milestones in twentieth-century feminist literature that ranged in length from a three-lined poem to five pages of autobiographical criticism. For each of the assigned articles (see table 1), one student from each discussion group assumed a leadership role.¹⁰ The selection and ordering of reading assignments was not random, as not all texts do a good peer-discussion make. Likewise, given the social/political environment where I taught, I never assigned texts on peer-discussion days that covered abortion, domestic violence, or rape survival stories, all subjects which I saved for myself to moderate.¹¹

Table 1. Discussion leader assignments

Date	Article Title	Group 1	Group 2	Group 3	Group 4
Oct 14	Higginbotham, “Teen Mags”	Hillary B.	Zach M.	Sarah C.	Tanya O.
	Zuniga, “Gender in the Media”	Bernice P.	Alice F.	Lauren R.	Liz E.
	Pozner, “What TV Teaches”	Emma K.	Lori G.	Rehwa F.	Marsha T.
Oct 21	Chernik, “The Body Politic”	Elena Z.	Madison R.	Paula W.	Ashley B.
	Rodriguez, “Breaking the Model”	Yen O.	Renee S.	Hannah Q.	Hisaye C.
	Siebecker, “Fat Girl Rules”	Irina V.	Julie C.	Yawen S.	John W.
Oct 28	Mainardi, “Politics of Housework”	Hillary B.	Zach M.	Sarah C.	Tanya O.

¹⁰ In a group with six students, each student leads a discussion every other week.

¹¹ Regarding the criteria for what risk is appropriate for small groups, this ethical decision is best made by the instructor and based, in part, on their knowledge of the socio-political climate of their campus. For information about student re-victimization, see Amy (2006).

	Crittenden, "Price of Motherhood"	Bernice P.	Alice F.	Lauren R.	Liz E.
	Ehrenreich, "Nannies, Maids"	Emma K.	Lori G.	Rehwa F.	Marsha T.

Peer discussion leaders completed a substantial amount of preparatory homework related to their assigned article, including electronic submission of the following items at least twenty-four hours in advance of the discussion period:

- a) a one- to two-page response paper that identified the thesis, summarized the content, and related the text to previous reading assignments
- b) a one sentence article summary to be read aloud at the start of their discussion session
- c) six discussion questions that check for reading comprehension and recall, analysis, and knowledge integration.
- d) answers to each discussion question in extended prose.

This preparatory assignment allows for individualized feedback regarding comprehension, analysis, and writing quality, but more importantly, it enables pre-class interventions in the case of inappropriate questions, and aids the instructor's preparation for the pending group activity.¹²

Implementing the Four-Folder System

On discussion days, students entered and immediately moved to their designated discussion group area where I placed their team's two-pocket folder (see fig. 2). Inside, students found graded work from the previous week, a semester-long list of peer leader date/text assignments, a collection of peer-evaluation materials, a copy of their doubts and decrees, and a pocket for submission of new work to be graded. My students came to class prepared to perform three consecutive discussion periods, each of which varied in length from ten to fifteen minutes, depending on the depth and difficulty of the text (see fig. 3). Each peer-discussion period was measured by a timer at the front of the room. Upon hearing the "ding," a neatly choreographed flipping of textbook pages visibly marked the beginning of their discussion work. It was during this opening sequence that I took my place to the side of one discussion circle and observed the conversation. Discussion leaders were required to read their one-sentence article summary aloud and then delve into a sequence of text-based questions that they crafted as homework. Although I coached students to refrain from making pop-culture references or soliciting the disclosure of personal stories, by no means did this prevent either topic from entering the discussion. Peer discussions tended to meander with multiple idea strands overlapping and spiraling around each other until the conversation converged around a truly deep or controversial idea. The following description does not describe an event from any one section of my introductory women's studies classes, but is instead a fictionalized composite description that captures the essence of student discussions that arose from my implementation of the four-folder system.¹³ In this scene, the discussion leader poses a question that leads her peers into a multi-pronged conversation about an excerpt from Betty Friedan's *The Feminine Mystique* (1963).

¹² On the rare occasion when fewer than twenty students enroll, I assign a weekly précis in response to each article. This assessment strategy may prove unrealistic for instructors facing larger classes or heavy teaching loads.

¹³ Fictionalizing protects the identities of my students and captures the repetitiveness of similar conversations across many sections of my women's studies class.

- Laura (discussion leader): “What does Betty Friedan mean when she says the problem has no name?”
- Agnes: “So there were all of these women that were feeling the same emptiness in their lives but no one was talking about it, and they didn’t realize that it was a shared problem.”
- Beatrice: “Yeah, I agree. Because there was nothing to call it, it prevented them from discussing it with each other. It made each of them feel like it was their fault, and that made them feel crazy.”
- Caroline: “That’s why I didn’t understand this article. We are sitting here and talking about it with each other, and there’s still no name for it, right? I mean, Friedan never gave it a name. I didn’t like the women in this article because I just don’t understand how these women put up with this. They’re so passive. There was this one woman in the article that was practically suicidal, and her solution was to basically sleep all day until she died.”
- Agnes: “It’s like that Leonardo DiCaprio movie, *Revolutionary Road*.”
- Danielle: “Or the *Stepford Wives*.”
- Beatrice: “That’s how all problems start. There didn’t used to be a term for sexual harassment either. That phrase did not exist. So many women were experiencing it but there was no outlet for them because how do you report something for which there is no word? It makes me think of that Anita Hill testimony we read.”
- Agnes: “My mom was a stay at home mom when we were growing up. I hope she never felt this way. I mean, she always seemed happy to me.”
- Beatrice: “Did you ever ask her if she was happy, or if being a housewife was what she wanted to be?”
- Agnes: “No. I mean, I don’t think she would have told us kids anyway. I mean she went to college and worked and stuff before she had us, so she chose to be a stay at home mom. We’re all grown and she still hasn’t gone back to work.”
- Laura: “So that relates to my next question. All of the articles that we read this week seem to be about the availability of life choices. The women in this article all went to college, and yet it seemed inevitable that they marry and become housewives. How much choice did these women have, and to what degree has this scenario changed?”

Although fictionalized, this excerpt captures numerous instances of critical thinking and collaborative learning within a short time span, and already we can begin to identify which students understood the article and those that could link the knowledge more broadly to our class and the real world. The discussion leader crafted questions that drew attention to the author’s thesis without decoding the text for her peers. Agnes was able to answer the discussion leader’s question and also chose to disclose a personal connection she made to the text by relating it to her mother, thereby relating the past to the present. Caroline was still processing the text, but was able to point to specific issues she had and talk through them. And what seemed at first to be an admittance of miscomprehension developed into a legitimate critique. The pop-culture references that followed her statement may seem to veer off topic, but I have found that comments like these are an attempt by her peers to engage and support the vulnerability and critical interpretation she displayed when she admitted to not identifying with the characters in the text. Beatrice assumed the role of peer-

teacher by relating the text to other course materials, which helped pull the other students back on topic. She also demonstrated (in her response to Agnes) how students frequently latch onto disclosure statements as a point of entry into more complex questions. For the assessor, this excerpt also draws attention to Danielle, who was not able or willing to fully engage the question posed by the discussion leader. I would re-evaluate Danielle's contribution when I later returned for additional observations of this group.



Figure 2. Standard four-folder classroom organization with floating instructor.

As the discussion period progressed, I rotated between groups, briefly visiting each corner of the classroom (see fig. 2). This process repeated when the second and third discussion leader from each group shifted the conversation to the next article. I brought closure to their conversations through a full-class overview during which I recapped the most significant discussion moments I had observed and reflected on the commonalities across each discussion group (see fig. 3). Rejoining the class for this reflective debriefing was a significant step towards building a learning community.

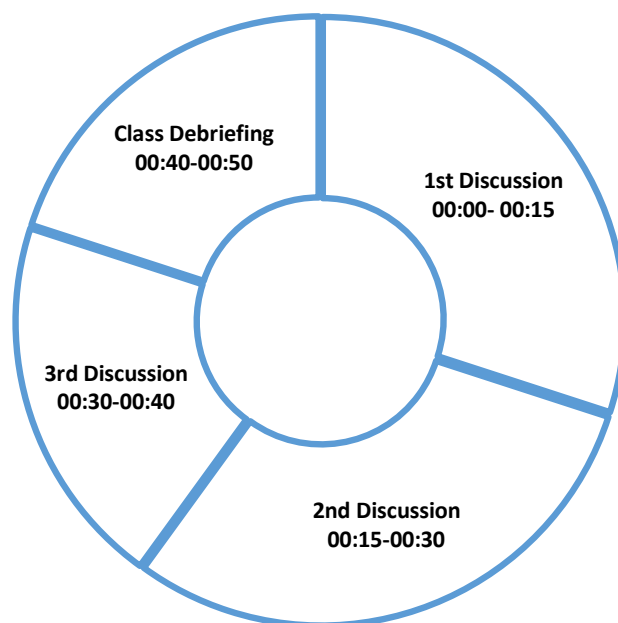


Figure 3. Division of peer discussion time.

Variations on a Theme

Should the descriptions of the four-folder system thus far seem stiff and repetitive, I offer the following variations that may operate as a virtual reset-button to re-energize the class, disrupt undesirable behaviors, and diversify interpersonal contact:

Pinwheel method. The discussion groups located in the four corners of the classroom are split, with half of each group breaking apart to join a group in another corner. To quickly and efficiently effect this transition, I asked all of the contributors (i.e., those students who are not leading a discussion) to move clockwise until they reached a new discussion leader. This repeated after each discussion session, and created a pinwheel-like experience that permitted discussion leaders to interact with a more diverse group of respondents (see fig. 4).

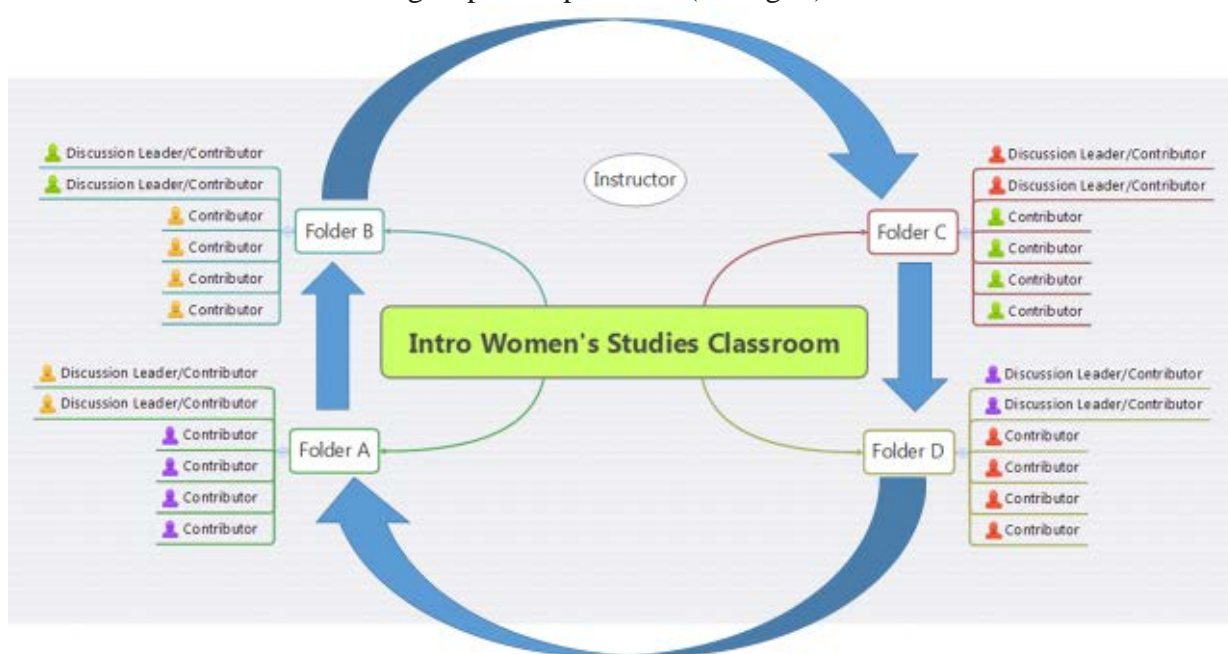


Figure 4. Pinwheel variation with rotating discussion contributors.

Scatter method. Index cards, each with a student's name across the front, are taped to the classroom walls before class to create new groupings of students. At any moment, I can pause the discussion and relocate students to new groups by moving their index cards; not a word is required on my part. This strategy is useful for regrouping the class into stronger/weaker groups, particularly if certain students would benefit from individualized coaching sessions with myself while the rest of the class continues independently.

Panel method. For potentially volatile discussions, I rely on the panel method for the greatest amount of classroom surveillance. I place tables, chairs, and name cards at the front of the room and sit the group discussion leaders there. Having already previewed their questions, I compile and order their best questions, then act as the panel moderator, calling on the student panel to ask those questions to the whole class. This method is particularly useful for reenacting discussions from previous weeks, if there is a topic that the class needs to revisit.

Roll call method. In this variation, discussion leaders are asked to direct each of their questions to a different student by calling out the chosen student's name before posing the question. After the chosen student answers the initial question, the discussion leader then selects another student to respond to the presented answer, and the discussion proceeds in this manner. When there is a consistent imbalance in the amount of student engagement, or a recurring problem with students interrupting each other, this method helps control the order and frequency of speakers.

Post-board method. The end of class does not necessarily signal the end of the discussion. If a topic is particularly exciting or challenging to a class, or if time runs out before the topic is adequately covered, the instructor may move the discussion to an online discussion board on a secured class homepage where the conversation may be opened up to the entire class. In my experience, international and recently-immigrated students who are self-conscious about their English vocabulary and/or accents were most enthusiastic about the post-board method.

Student Assessment

Four types of weekly interlocking formative and summative assessments determine a significant portion of students' final grades. One quarter of their final grade is determined by averaging their discussion leader grades, and their discussion contributor performance constitutes another quarter. While a student's role as contributor may at first glance seem secondary to the four-folder system, it is in this position that the instructor is most likely to observe evidence of students' metacognition and self-reflection as they spontaneously compare/relate their understanding of the text and their experiences to the knowledge-producing students around them. Equal weighting of these two roles emphasizes interdependence among team members.

Formative assessment. Pre-discussion formative assessments are crucial to ensuring accountability during the preparatory stages of the discussion leader role. Assessment occurs when the instructor reviews student drafts of questions, summaries, and answers in response to the article assigned for discussion. Although no formal grade is recorded, the student gains valuable individualized feedback. This private dialogue between instructor and student trains students to revise and reflect upon their work.

Summative assessment. Two forms of ongoing assessment take place while the instructor travels between discussion groups. First, students receive a weekly contributor grade that gauges their ability to demonstrate comprehension and engagement. The second form of summative assessment is a formal evaluation of the discussion leaders' in-class performance and revised homework that is submitted by way of the discussion folder. This allows for assessment of discussion leaders even when the instructor is not physically present for the entirety of the discussion period (see fig. 5).

INTRODUCTION TO WOMEN'S STUDIES DISCUSSION LEADER GRADING RUBRIC	
STUDENT _____	DATE _____
_____/20	QUESTION QUALITY Did the questions prompt meaningful discussion? Were the questions relevant? Were the questions easily understandable? Were the questions answerable? Did the questions highlight the main themes in the article?
_____/20	LEADERSHIP SKILLS Did the discussion leader help facilitate the discussion? Did the leader maintain control of the discussion group? Did the leader ward off disrespectful behavior? Did the leader keep the group engaged?
_____/20	TIME MANAGEMENT Did the discussion last for the entire allotted time? Did the leader prevent the group from veering off topic? Did the discussion leader spend an adequate amount of time on each question?
_____/20	READING COMPREHENSION Could the leader discuss the article without re-reading the text? Was the leader able to answer questions about the article? Did the leader demonstrate comprehension of the main themes and arguments presented in the text?
_____/20	DISCUSSION PREPARATION Did the discussion leader submit an electronic copy of her/his article summary and questions at least twenty four hours prior to the discussion period? Were there six questions? Did the discussion leader answer her/his own questions in extended prose? Was this work typed? Did the discussion leader submit a revised version of the questions and answers for grading?
_____/100	
Comments: _____ _____ _____	

Figure 5. Discussion leader grading rubric.

Peer assessment. Discussion leaders face a considerable amount of performance pressure, and the outcomes of that work are partly dependent upon their classmates' willingness to engage. Discussion leaders use a quick peer-evaluation worksheet to report on their group's participation efforts (see fig. 6). Evidence exists that peer feedback enhances the internalization of quality standards (Falchikov, 2005); and although some scholars fear that peer assessment disrupts power relations in the classroom by undermining the authority of the instructor (Falchikoc, 2005), this technique will appeal to feminist teachers who dislike the dictatorship power-base of the traditional college lecturer.¹⁴

¹⁴ Students do not determine their peers' final grades, but they do provide me with valuable data about what happened when I was not present.

Figure 6. Peer Evaluation Worksheet.

INTRODUCTION TO WOMEN'S STUDIES PEER EVALUATION TO BE COMPLETED BY THE DISCUSSION LEADER	
DATE: _____	
<p>ASSIGNMENT DESCRIPTION: As the discussion leader, you will evaluate the contribution of your group members. These guidelines should help you complete this evaluation in a fair and meaningful manner. During discussion, everyone should participate by speaking, listening, thinking, and encouraging intellectual growth. The discussion team should share ideas, questions, and relevant examples. Students must limit their discussion to the assigned text and stay on task. Base each participant's evaluation score upon the quality of their contribution to the group discussion. Criteria for evaluation includes: evidence of preparation, providing relevant and insightful ideas and questions, encouraging others, listening attentively, and respecting others' discussion rights. Behavior that is damaging to discussions includes: evidence of poor preparation, dominating the conversation, repeatedly interrupting others, ignoring or withdrawing from the group, discouraging dissenting opinions, or other disrespectful behavior.</p> <p>EVALUTION INSTRUCTIONS: After the discussion period ends, the following evaluation sheet should be completed by the discussion leader and placed in the back flap of the discussion folder. In the discussion performance box, place a check plus, check, check minus, or zero to indicate where each student belongs within the performance spectrum. Discussion leaders will not determine the grades of their peers, but these evaluations will help your professor determine each student's final discussion grade.</p>	
<div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> Excellent Good Fine Poor </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> ✓+ ✓ ✓- 0 </div>	
Student Name	Discussion Performance
1.	
2.	
3.	
4.	
5.	
6.	
7.	
Comments: _____ _____	

A Conversation Leads to Revision

Is the four-folder system a superior instructional strategy? Quite honestly, that is not the question that this article intends to address, nor has the data collected thus far sought to provide a competitive or hierarchical perspective regarding feminist teaching methods. As Johnson-Bailey and Lee (2005) remind us, there is no universal way to approach feminist pedagogy, nor will all instructional methods work equally well for all professors. And it is at this point that I wish to reflect on a conversation that I had with a colleague from another institution who quickly pulled back when I described the four-folder approach. It was immediately clear to my colleague that my enthusiasm for improvisation and spontaneity was a manifestation of the privilege I enjoyed as a white female instructor in a predominantly white female classroom. Although my colleague applauded the results of my method, she disavowed any interest in experimenting with this strategy because for her, as a woman of color, it implied an unreasonable amount of personal risk. As Ming-yeh Lee and Juanita Johnson-Bailey (2005) attest, “feminist pedagogy has encouraged teaching practices that empower students by asking teachers to develop styles that are non-authoritative and nurturing. However, we suggest that no one-size-fits-all feminist pedagogy exists, and that feminist pedagogy and women of color can make for a dangerous liason” (p.111). My colleague astutely confirmed that my course design did not adequately cope with the effects of my whiteness. Had I inadvertently recreated the same trappings as the “safe classroom” feminists who had come before?

Considering that white feminists often claim “safety” when they want to avoid the topic of race, (Ellsworth, 1989; Kishimoto & Mwangi, 2009) alongside the fact that the vast majority of my students were white heterosexual women, we carried with us a considerable amount of privilege. In response to concerns raised by my colleague, I revised my course to better address lingering privilege (especially my own whiteness) by increasing the number of texts that dealt with race; referring to my own racial privilege; placing my “racialization” lectures earlier in the semester; spreading articles that engaged topics of racial identity, whiteness, and racism across the semester; and equally interrogating concepts of race in articles by white authors so that “everyone learns that affirmation of multiculturalism, and an unbiased inclusive perspective, can and should be present whether or not people of color are present” (hooks 2014). Further, emphasizing the experiences of non-western women of color presented opportunities for my students to grapple with perspectives that more adequately reflected the global majority.¹⁵ Apart from the actual content, I modified the structure of the course to include more online discussion boards through which students could engage in disembodied dialogues, and I made better use of the four-folder variations to offer minority students occasional breaks from predominantly white discussions. Merely remaining cognizant of the hazards of tokenism and hypervisibility of women of color in my overwhelmingly white class improved my choices in the selection and delivery of content.

It would be naïve to claim that these strategies undid white privilege, but they did have a positive impact. The degree to which the majority of my white students refuted the existence of white privilege lessened by midterm. These strategies may also have reduced the pressure felt by non-white students to comply with dominant white perspectives during discussions, though positionality makes this data more difficult to measure. I had not made their women’s studies experience *safer*, but perhaps some students gained a better sense of belonging in this revised learning environment.

¹⁵ For more on the benefits of globalizing with respects to teaching about race and class, see Hobson (2007).

Evaluation of the Four-Folder System

This study has used my teaching experience to examine the course design of a first-year undergraduate introductory women's studies course in the general education multicultural curriculum at a southern research university. The existence of unequal power in the classroom is not negated, but the small-group work and classroom community-making that develops over the course of the semester challenges (without fully dismantling) oppressive power relations through strategic separation, rotating leadership roles, and collaborative discussion periods that value the contribution of personal experiences, feelings, and ideas. The four-folder system might seem a return to traditional consciousness-raising strategies, but this would be an understatement. Unique advantages of the four-folder system include exploiting instructor surveillance by creating semi-private problem-solving classroom spaces¹⁶ and exploiting power differentials by rotating the discussion wheel to modify the "margins" and "centers" of power in the room. This course design addresses the politics of the personal by valuing experiences among differently-situated women, but does not dispute that the activity places students in rhetorical danger of each other, and in proximity to what they originally perceived as the danger of feminism itself. By repeatedly simulating feminist debates, students make sense of the real world where safety may not be an option. To a certain degree, it is freedom from safety that enables this learning strategy to work. The cooperation and mutual benefit of the four-folder system achieves the "positive interdependence" described by Johnson, Johnson, and Smith (1991). From a feminist perspective, this model surpasses content mastery by straining towards the goal of training students to become self-directed learners who better understand themselves in relation to society. The following course evaluations from students in one of my fall 2011 classes evidences positive reception of the four folder system, and adds further support to studies (Springer, Stanne, & Donovan, 1999; Pascarella & Terenzini, 2005) that show structured group work to positively influence student motivation and learning.

"I thought the group discussions were extremely enlightening and useful. The groups allow students to create unions with other students and discuss the articles in a way that is more interactive than lecturing. In these groups I got to discuss the things which were unusual for typical teenage conversation but something I feel passionate about."

"My professor... has a way of keeping control of the classroom and discussion while also allowing a time for students to express their views. I appreciate her trust in allowing us to break into discussion groups to talk about the readings."

"I really enjoyed the groups. They helped me personally learn the concepts and it was useful since it helped build friendships that could be used in the class and outside of class. The groups made the discussion clearer since we had already been brainstorming about how to do things. I applaud the teacher in being brave enough to let us do this."

Student evaluations across all sections of my women's studies classes suggested that my course design achieved many of its intended goals. Most students self-reported that they

¹⁶ This model allows for varying degrees of surveillance that empowers students to selectively disclose personal information about themselves, and proved particularly useful for several students who were comfortable disclosing their sexuality to their peers, but did not immediately wish to share that information to me.

appreciated the course design, and many believed it enabled them to learn in a community environment. Their descriptions of the course align with Charlotte Bunch's (1983) vision of women's studies challenging students to become personally invested in the discipline. It may be possible for students to hide in a traditional seminar, but independent peer-led discussions thrust upon them an added responsibility for knowledge acquisition. My students frequently disclosed that they felt guilty if they were unable to answer their peers' questions. Peer-pressure (in the most positive sense) to take personal responsibility for group achievement intensified as the semester progressed, and even extended into other class assignments. This was true for students of all skill levels, including those who had completed prior women's studies classes.

"Coming into the class, I had received most of this information already due to another women's studies class and multiple sociology classes. So while the information was not new, it was presented in a different way or with different focus including going more in depth than I had previously done." End-of-semester student reflection.

Student confessions such as these address my original breadth vs. depth dilemma and my personal crisis regarding the purpose of introductory women's studies seminars. Creating a multifocal discussion-based learning environment enabled me to essentially teach four small sections at once, each delving into different levels of depth to correspond with the group's needs.

An unanticipated effect of this course design was that student engagement greatly improved in my full-class discussions. Spillover moments such as these allow us to pinpoint the achievement of meta-objectives in the women's studies curriculum, as well as the successful integration of knowledge and skills across course components. As Barbara Millis (Active, 2010, p.5) argues, the type of "deep learning" that instructional methods like the four-folder system promote emerges from instructors who are committed to taking the time to design activities that push students in new and sometimes uncomfortable directions. These exercises move towards Michaelsen's (1992) concept of purposeful team leading, during which the majority of class time is devoted to a model in which the instructor acts as project facilitator while small group activities are repeatedly performed. The implied interactivity and interpersonal communication, shared-decision making, personal accountability, and conflict management skills demanded by the small group work in the four-folder system enhanced student learning.

Final Thoughts on the Sound of Feminist Education

Our folders are impeccably structured and ordered, a quilt of artifacts reflecting the time and effort of individual students and teams. It documents a sequence of lessons and files away a mélange of ideas that are representative of the class, and yet the knowledge produced by each discussion group is inescapably different. The most obvious and physically-measurable transformation that resulted from my implementation of the four-folder system was that my classes grew increasingly loud. Students acclimated to the volume of simultaneous and overlapping conversations that characterized our classroom soundscape, and which I interpret as sonic evidence of student engagement. Students may enter into my classroom with the same tasks to perform, but they leave with different conclusions. Thus is the inherently divergent nature of the feminist classroom, and the reason why the four-folder system succeeds. As I reflect on future implications, I recognize that this highly-structured collaborative learning model requires a great degree of organization, multi-tasking, time investment, subject competence, and instructional improvisation. It will not

work equally well for everyone, but when the conditions described in this article manifest, benefits abound.

**My classes are loud
Enter the room
Hear how feminism sounds**

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Perspectives on Aging among Graduate Social Work Students: Using Photographs as an Online Pedagogical Activity

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Abstract: The United States is experiencing an aging of the population, and by 2030, 20% of Americans will be 65 years or older (Federal Interagency Forum, 2010). However, for many helping professions, including social work, medicine, and nursing, student interest in gerontological practice is quite low. One international study found that only 5.4% of the more than 1,000 social work students who were surveyed indicated that working with older people was their primary area of interest (Chonody & Wang, 2014). Finding ways to improve student interest and break down biases against older adults is essential to improve student interest, and incorporating evidence-based activities that can be incorporated into courses that are offered in an online format are increasingly needed as this mode of instruction continues to expand. The current exploratory study sought to pilot a two-part photo-activity in an online graduate social work practice course focused on working with older adults. Quantitative and qualitative results suggest that the activities helped students' process their views on aging and older people, and most students reported at least some change in their attitudes. The development of innovative ways to engage students online by repurposing technology that they are already using can advance online pedagogy and facilitate critical thinking.

Keywords: ageism, aging attitudes, pedagogical intervention, online platform

Social work is a diverse field with opportunities to work with many different populations; however, gerontological practice consistently ranks amongst the lowest preferred practice area (Weiss, 2005). An international study found that only 5.4% of the more than 1,000 social work students who completed the survey indicated that they would prefer to work with older adults after graduation (Chonody & Wang, 2014). In a study of nursing students, working with older people in a nursing home setting was ranked the lowest preferred practice setting, and this did not significantly change from the start of the nursing program (King, Roberts, & Bowers, 2013). These findings are troublesome for helping disciplines given that 20% of the total U.S. population is expected to be 65+ by 2030 (Federal Interagency Forum, 2010). Thus, an urgent need for helping professionals in gerontological practice is becoming a reality, and educators are searching for ways to increase student interest (Butler & Baghi, 2008; Chonody, 2015).

Research indicates that both lack of knowledge about aging (Goncalves et al., 2011) and ageist attitudes (Kane, 2007) are contributing factors to low student interest in gerontological practice. Attempts to change students' attitudes have included infusion of content in a course, service learning, and aging electives. Results indicate that both instructional as well as experiential approaches can have an impact on student attitudes (Funderburk, Damron-Rodriguez, Storms, & Solomon, 2006; Hwang, Wang, & Lin, 2013; Synder, 2006; Gutheil, Chernesky, & Sherratt, 2006;). Increased knowledge helps challenge myths thus improving students' understanding of aging and older adulthood (O'Hanlon & Brookover, 2002). The experiential component is consistent with Allport's (1954) contact theory, which asserts that

exposure to members of an out-group can reduce prejudice. Research in social cognition suggests that contact allows empathy and perspective taking to occur; this in turn, helps to break down prejudicial attitudes (Castillo, Camara, & Eguizabal, 2011), and a review of the literature supports that contact with older adults is associated with more positive attitudes (Wang & Chonody, 2013).

In a recent systematic review of the literature, 58 articles that described pedagogical interventions aimed at influencing aging knowledge, attitudes toward older adults, and/or interest in gerontological practice across multiple academic disciplines, including social work, nursing, and medicine, were identified. Results indicated that improving gerontological interest was the most challenging and the least studied of the three areas (Chonody, 2015). Moreover, 95% of all of these studies occurred in traditional, face-to-face courses or workshops (Chonody, 2015). This dearth of research on pedagogical approaches for online courses in the extant literature is problematic given the increased demand for more courses offered in this format. The development of methods that rely on the best possible strategies for creating change will further advance evidence-based practices for online instruction. Further, the use of a theoretically driven model to derive a pedagogical activity grounds the application in a rich body of knowledge that provides insight into why it works. The current study implemented a photography based pedagogical intervention in an asynchronous online graduate level aging course to pilot its application.

Photography and Instructional Methods

Photography is increasingly an element of our day-to-day lives as smart phones have made taking pictures easily accessible and virtually limitless (Chonody & Amitrani-Welsh, 2014). It is also a form of communication (Van Dijck, 2008) as images are widely shared through social media platforms and amongst one another via text. Many people, in particular young adults, use photography as a way to generate conversations and strengthen connections within the peer group (Van Dijck, 2008). Smart phone applications such as Snapchat or Instagram primarily rely on an image often absent of any text and put forward an idea, a point in time, and/or an element of identity. This cultural shift illustrates the way that old technology is repurposed, and a new means of interaction and community building emerges (Van Dijck, 2008).

To process the symbolic representation of the visual information relies on a part of the brain that is older than the part that is used to process verbal information (Harper, 2002). “Thus, images evoke deeper elements of human consciousness than do words” (Harper, 2002, p. 13). Arts-based methods of inquiry can shed light on topics that are complex or challenging to explore (Black, 2011), which may be social or personal in nature (Hagedorn, 1996), and self-exploration and reflection can be generated through the use of photography (Chonody & Amitrani-Welsh, 2014; Weiser, 2013). When respondents are asked to view and interpret a photograph, they are actively seeking to assign meaning to the visual stimulus (Harrison, 2002). The images may be self-created, but this is not necessary for the process of “reading” the photograph (Harrison, 2002). That is, respondents can engage with visual information and interpret it and making meaning even if they were not the originators of the material.

Arts-based methods, particularly photography, can be useful as a pedagogical activity (Leavy, 2009). Engagement with students, especially those that are “wired” (e.g., born into the computer era), in a way that takes advantage of their perspective on the world can more readily generate reflection skills given that they are realized through a skill set that they are already

comfortable in using (Tornabene, Versnik Nowak, & Vogelsang, 2012). By coupling narratives with photographs not only is student engagement improved, but instructors can also gauge the depth and breadth of student learning (Tornabene et al., 2012) given that these methods “can reveal tacit knowledge and make knowledge and meaning construction visible” (Black, 2011, p.68).

The use of photography in the educational settings, either for research or pedagogical purposes or both, primarily draws from Photovoice (Wang & Burris, 1997) and photo elicitation methods (Collier, 1957). Photovoice relies on the individual creation of photographs around a particular topic, which are then deconstructed using a framework of questions that seek to reveal the deeper meaning and symbolic representation within the photograph (Wang & Burris, 1997). For example in a study of high school students in Philadelphia, Photovoice was implemented to explore the presence and experience of violence by looking at neighborhood assets and challenges (Chonody, Ferman, Martin, & Amitrani-Welsh, 2013). Photo elicitation, a research technique used in anthropology and sociology, is a technique that facilitates conversations about thoughts and feelings that may be difficult to access when not accompanied by visual stimulation (Hagedorn, 1996), particularly in participant interviews (e.g., Collier, 1957). Participants are shown photographs, typically supplied by the researcher, that are used to generate conversation around related topics.

There is limited research evidence on the use of arts-based methods in higher education as a pedagogical method to initiate critical thinking and garner greater depth of understanding around particular content. Even fewer studies exist for pedagogical methods implemented in online courses; however, some literature across various disciplines was identified. Each of these is reviewed here as they informed the development of the photo activity that was implemented in the current study.

In an application of Photovoice, photography was used to help students deconstruct gender in a traditional classroom setting (Robinson-Kellig, Hamill, Gwin-Vinsant, & Dashner, 2014). Data were not collected on either student responses to the photo activity or changes in knowledge/perception, but the authors report that the project was successful in that students were engaged in critical thinking about socially ascribed roles and took ownership over their own learning (Robinson-Kellig et al., 2014). In a similar article, instructors aimed to improve critical thinking and problem solving skills for health science students through engagement with either Photovoice or photo elicitation (Ott Walter, Baller, & Kuntz, 2012). In the Photovoice activity, students took pictures around campus to represent the impact of alcohol and drug use. For the photo elicitation activity, students first took pictures of various dimensions of health, and then as a class, the “best representations” for the ten dimensions of health were determined through a voting process. Finally, each student then provided individual interpretations of the photographs. These activities were not formally evaluated, but Ott Walter and colleagues (2012) note that the use of photography to achieve classroom goals provided “a creative way to simultaneously address two separate issues: awareness of social problems or determinants of health and engagement in critical thinking” (p. 386). They also point to the fact that students were able to develop a new perspective on the issue by reflecting on the photographs, and their written responses to the photographs are indicative of increased awareness of their environment (Ott Walter et al., 2012).

Likewise, Chio and Fandt (2007) discuss the use of Photovoice within a face-to-face diversity class, which had around 80 students enrolled in it over the course of two years. Again, a formal evaluation of student learning or attitudinal change was not included, but the authors do

highlight several lessons learned from its implementation. First, the authors state that they continue to learn about themselves through use of the Photovoice process, which is important for ongoing consideration of one's social position and location. They also acknowledged the strengths that are brought out in students as they make themselves vulnerable and were opened up to this challenging learning experience. Moreover, photovoice created a context for communication and knowing that could move beyond categories (e.g., teacher) and bring forward the true nature of learning as a two-way process—"flowing from them to us" (Chio & Fandt, 2007, p. 495).

Only one article was identified that was related to gerontology, employed an arts-based pedagogical technique, and used the activity in an online course (sociology of aging). This study sought to explore students' aging beliefs and the intersection of gender and age through drawings of older adults, which were generated by current and previous students (Barrett & Pai, 2008). Students analyzed patterns found in the sketches and then participated in asynchronous online discussion, which generated a conversation around ageism and the intersectionality.

Data were collected in the form of a formal evaluation of the activity as well as the actual interpretations of the sketches. The four most common themes that materialized from the discussion of the sketches were: ageist beliefs reflected in the drawings, the impact of intergenerational contact in shaping views of older people, the role of the media, and gender differences. Students identified both positive and negative ageist beliefs, including wisdom, knowledge, stubborn, ill-tempered, grumpy, wrinkled, snobbish, and lonely, and discussed how these stereotypes may develop, including contact with older people, age-segregation, and the media. To evaluate the activity itself, students completed an anonymous online survey, and the overall responses were primarily positive. In particular, a majority of the students (63%) indicated that the sketch discussion was effective in stimulating their thinking around ageism, and 93% reported that they enjoyed the discussion. In terms of reported attitudinal change, 39% related that their perspective on older people was now more positive. These results are promising for the use of visual materials to generate discussion around complex topics in online courses, and the potential to influence changes in thinking.

Current Study

Building on the photo-activities developed in these other projects, a new photography-based activity was developed for an online aging course. Specifically, this activity centered on self-reflection, group discussion, and critical thinking. The self-reflection component took the form of a two-part activity. First, students posted a photograph on the online discussion board in their learning management system (Canvas) to illustrate their perspective on aging and included a description of why this photograph was chosen. Second, an online discussion of aging was facilitated the following week by processing the entirety of the photographs that were posted by the class. Thus, the activities were intended to create a reduction of in-group favoritism by blurring the (false) distinction between the in-group (young) and the out-group (old) through identifying similarities and critically evaluating perceptions of older adulthood.

Methods

For this case study, data were collected from graduate social work students at a Midwestern university who were enrolled in a 6-week summer course (2015, 2016) entitled *Social Work*

Practice with Older Adults. The course was taught by the same instructor in an asynchronous online format, and the content and structure was exactly the same for both times that the course was taught, including prerecorded lectures and notes on the topic for that week. The Institutional Review Board (IRB) approved this study prior to data collection.

Students were asked to complete a short survey at the beginning of the semester (week 1) and again at the end of the course (week 6; described below). In addition, students participated in discussions on their perception of aging. The first discussion board (week 1) instructions were as follows:

- Post a photo that represents your perspective on aging or your idea of "old."
- Consider these two questions: Why did you choose this image to represent aging or your idea of "old?" What does it mean to be aging or "old" (personally and/or culturally)?

The second discussion board (week 2) instructions asked students to review a PowerPoint slide show created by the instructor from the photographs posted the previous week and then:

- Consider the following questions: What patterns do you notice in the images? What cultural messages are communicated about aging (and are they represented here)? How does it make you feel to think about being "old?"

Students were given credit for completion of the survey (4 points each), but the survey itself remained anonymous by using an online platform (Qualtrics). A survey acknowledgement linked to the online learning management system for each individual (Canvas) allowed students to earn credit for participation. In other words, students went off site to complete the surveys, but then had to indicate via a "quiz" if they had completed the survey by indicating "true/false" to this question: "I have completed Survey 1 (or 2)."

Students were also graded for their participation in the discussion posts. As per federal guidelines regarding online courses and required time spent in activities related to a course, discussion posts are required nearly all weeks of the course. Thus, for these students, the two photo-based discussion boards were used for both a learning opportunity and as a part of routine class activity expected with an online course.

Measures

Standardized scale. The Fraboni Scale of Aging (FSA; Fraboni, Saltstone, & Hughes, 1990) was used to measure the affective and behavioral aspects of ageism. Two subscales of the three subscales FSA were used in this study. These 20-items are evenly divided between subscales for antilocution (e.g., "Teenage suicide is more tragic than suicide among the old"), and avoidance (e.g., "I don't like it when old people try to make conversations with me"). The decision to leave out the discrimination subscale (9-items) was based on a review of the items and finding that the wording was slightly more anachronistic than the other two subscales (e.g., "Old people don't really need to use our community sports facilities), and the content too overt for study participants (e.g., "Old people deserve the same rights and freedoms as do other members of our society"). A 6-point Likert-type scale was provided (1 = *strongly disagree* to 6 = *strongly agree*). After reverse scoring one item, all items are summed to create an overall ageism score. The theoretical range for the FSA was 20-120, and reliability was acceptable in this case study ($\alpha = .75$). The FSA was included in both Survey 1 and Survey 2.

Survey items. A brief demographic section was included on the Survey 1 and included age, contact with older people, relationship with an older adult, and age that the participant considers

“old.” Interest in gerontological practice (i.e., working with older adults as the primary work setting) was measured by a series of author-created questions. First, students were asked to indicate their primary area of interest (Survey 1 only). Next, students were asked: “How likely do you think it is that you would be working primarily with older adults once finishing your degree?” and a 6-point Likert-type scale was provided (1 = *very unlikely* to 6 = *very likely*); this item was found on both Survey 1 and Survey 2. Two open-ended questions were also included on Survey 2: “If you would like to work with older adults when you complete your degree, can you please tell me why? Conversely, if you definitely would not like to work with older adults, can you please tell me why?” and “Is there anything else you would like to say about working professionally with older adults? Or about the class?” On Survey 2, students were also asked: “To what extent have your feelings about working with older adults changed since the beginning of the class?” and a 4-point Likert-type scale was provided (1 = *not at all* to 6 = *a great deal*).

Data Analysis

Quantitative Analysis. SPSS 22.0 was used for descriptive analysis of the demographic questions, survey items, and the standardized scale. No nonparametric tests were used to determine if any statistically significant changes occurred on the ageism scale and the likelihood of working with older adults because the surveys were unable to be matched from time 1 to time 2.

Qualitative Analysis. Content analysis was used to code open-ended questions and discussion posts. Themes were generated based on student responses and then grouped together to garner a representation of the findings from the data. Frequencies were recorded for the themes amongst both the written materials and the photographs.

Results

Demographic Make-Up

In the first data collection phase (Summer 2015), 24 students were enrolled in the course; however, in the second collection phase (Summer 2016), only nine students took the class making the total number of participants 33. The response rate for Survey 1 was 100%. All the students were female and had a mean age of 32. Over half the participants identified health/hospital as their preferred practice area upon graduation, which is not surprising given that the course is situated within the health concentration for the master’s of social work degree. Nonetheless, 18% indicated gerontological work as their preferred practice area. On average, students also indicated frequently spending time with an older person and rated that relationship good. The average age at which the students would consider themselves “old” was 70, and over a third indicated an age from 80 to 90. The response rate for Survey 2 was 85% ($n=28$). All data collected from phase 1 and phase 2 were merged for analyses. Table 1 provides all the demographic information for the participants.

Table 1. Demographic Characteristics of the Participants

Variable	Mean (SD)	Frequency
Female		33 (100%)
Age (24-50)	32.39 (7.21)	
Spend time with older people	2.39 (1.06)	
Relationship with older adult	4.48 (0.63)	
Age considered "old"	70.19 (10.27)	
50-60 years old		7 (21.2%)
65-75 years old		15 (51.4%)
80-90 years old		11 (33.3%)
Area of practice		
Aging/Gerontology		6 (18.2%)
Health/Hospital		18 (54.5%)
Adult Mental Health		4 (12.2%)
Other		5 (15.1%)

Discussion 1 Post: Visual Representations

Prior to merging the qualitative data from both sections of the course, the two slide shows generated from student images were reviewed given that each student group viewed a different set of images. While there were some slight variations in the subject matter of the images that were chosen, the slide shows were remarkably consistent across the two groups. After coding the content of the images and the discussion posts, detail and descriptions were not lost. In other words, there was not anything profoundly different between the two groups in their posts that would be pose an issue, and the major themes of the images and posts were found amongst both groups.

The predominant image posted featured an older person ($n=15$). Seven of these images were close-ups of the individual's face (women=3, men=4), and three were drawings of someone who looks prototypically old; that is, gray hair and wrinkles. Another five images were an older person receiving care or lying in a hospital bed (women=4, men=1). The next most common type of images was a picture that illustrated the progression of time either with a number of hands or people of different ages. Three other photographs depicted the passage of time more metaphorically (i.e., tree, leaf, candle). Two students posted an image that represented a journey (e.g., a road), while another two posted a picture of their grandmothers not acting/looking "old." The final four photographs were: the AARP logo, a positive meme, a famous person who is 90 but does not appear to be, and older people doing yoga.

Despite the fact that many of the photographs were used to illustrate the visible signs of aging, the themes present in the content of the post were primarily positive ($n=15$), and even in those responses that were more mixed in their content ($n=11$), a positive message still dominated. Students discussed that life and aging are a journey, and that this time in life is just the "next chapter," "stage of life," or "just part of life." Students also discussed the knowledge, experience, advice, and wisdom that older people have along with the "good stories" that they tell. A few

students discussed the complexity and richness of older age in terms of accomplishments and roles. For example, one student stated,

(photograph of Russian nesting dolls who progressively looked older) I chose this image to represent my idea of “old” because similar to the Matryoshka doll which appears to just be one doll, elderly people have more to them than meets the eye. When you open the Matryoshka doll, you reveal many different dolls, just as when you begin to speak with an elderly person, you realize they have many different layers. They have held many different roles over the course of their lifetime and have had many experiences...To me, aging is just adding another nesting doll, or new role, on top of the smaller nesting dolls, or older roles.

Other positive themes included the idea that old is “just a state of mind” and that many benefits come with being “old,” such as senior discounts and retirement. Students also acknowledged that aging is a “beautiful thing” and that they seek to “live life to the fullest.” Table 2 provides all of the themes found in the data, the frequency of their occurrence, and a short illustrative quote.

Table 2. Themes for Discussion 1

Theme	Frequency	Illustrative Quote
<i>Positive</i>		
Stage of life/journey	15	I think that getting old means that we are turning the next chapter in our lives and we are taking on a new role in our families and society.
Wise, advice, knowledge	11	Trees represent wisdom, something that is gained when you grow old. Becoming old means holding wisdom and adapting to life’s challenges and changing over time.
Good stories	7	...when one is aging, it means that they have lived a long life and have acquired many stories and created many memories to share with others.
Lived a full life	5	To me, being “old” is a reflection of a life well lived, full of meaning and purpose.
Aging is beautiful, layered, or complex	4	The human spirit can shine brightly until the end [like that of the candle].
A state of mind	4	Just because you look “old” does not mean that you are “old”...mind over matter.
Retirement, less work	3	Retirement is a time where one can relax, regroup, release, enjoy family, and travel more.
Self-reflection on life, accomplishments	3	I imagine that those who are aging are looking back on life and all the things that they have accomplished.
Discounts	2	Growing old means that you have access to senior discounts, senior groups, and affordable housing.
<i>Negative</i>		
Changes to the body, weaker, need care or assistance	14	My perceptions of “old” are individuals who are no longer able to care for themselves.

Visible signs of aging	8	[This image] depicts an elderly person who is visibly growing older due to the gray hair on the face and head as well as having wrinkles on the face...growing old means that there will be obvious physical changes to one's body that are obvious to others.
Loss of autonomy, not enough resources	4	[older people] depend on their loves ones, care takers, or nursing homes to manage their daily living tasks such as eating, getting dressed, bathing, etc.
Mental incapacity	3	As you age, one begins to forget things.
Loneliness	3	I fear...being someone who is possibly lonely, isolated from family and friends...
Scared of getting old	3	...thinking about "old" terrifies me. You never know how you are going to be when you become 80 or 90.
Annoying/grumpy	2	...the woman in the picture is old, and has a sort of "don't bother me" look on her face, which I associate with older people.
Death	2	One of my worst fears is...the inevitable process of aging and dying.

Only six posts were solely negative. Students who focused on negative aspects of aging primarily mentioned visible signs of aging and physical changes to the body including being weak, vulnerable, or in need of assistance. Some also pointed to mental incapacity, loneliness, and loss of autonomy as hallmark of their perspective on aging. A few even mentioned that the thought of "being old" was "terrifying." This post is representative of that category:

I have always been scared of getting old...it is an unknown future and it scares me. I see what the media shows...mental deterioration, physical deterioration, and a time of helplessness...relying on others, not having enough resources, being unaware, and annoying to others.

Table 2 also provides the negative messages, their frequencies, and short illustrative quotes.

Discussion 2: Processing Images as a Group

Students' processing of the images was consistent with the content analysis that I conducted on the images and posts for Discussion 1. The most frequently identified pattern amongst the images that students named was the idea that aging is a journey, a process, or stage of life ($n=16$). One student wrote, "Everyone will have the same narrowing path, and everyone's candle will unavoidably burn out." The next most frequent pattern that students identified was physical changes in appearance ($n=13$). One student wrote, "the pattern I notice most was the elderly depicted in an older and near death way." Physical decline was mentioned slightly more often ($n=7$) than wisdom ($n=5$). The final pattern that students noted was that aging was beautiful or in the eye of the beholder ($n=3$). Interestingly, three students indicated that most of the images were negative, and another three felt that most of the images were positive; these responses were across the two different slide sets.

Overlapping themes emerged between the recognized patterns found in the images and the cultural representations present in the images, which is to be expected given that the patterns are reflective of social attitudes toward older people. In terms of cultural messages in the images,

negative stereotypes were the mostly highly identified theme ($n=17$) and students wrote that the cultural message is “aging is bad,” “there is a large concentration on youth and beauty,” and “you will need assistance in old age.” Another student wrote, “There are certain stereotypes that go along with aging including memory loss, increased grumpiness, financial stability, decrease in sexuality, burdens to society, etc.” Five students felt that the images promoted a cultural message that old age is associated with wisdom and being respected, and another five students felt that the cultural message communicated in the photographs was that “being old does not mean you are going to be alone.”

Lastly, students were almost evenly divided on their reaction to the question: “how does it make you feel to think about being ‘old’?” Fourteen students had positive perspectives on the aging process stating messages such as: “my grandma prepared me and I’m not afraid to be old,” “I’m going to make the best of it and have fun,” and “aging can be beautiful.” Twelve students expressed fears about the aging process and growing older. These fears were mostly associated with health, and one student wrote, “I am worried that I will not be able to take care of myself and depend on others.” For another student, she simply stated, “I don’t like to think about growing older.” For six other students, they expressed a mixture of positive and negative feelings about growing older. This student’s post is representative of those feelings,

After reviewing these pictures, I feel that I am both afraid to get older, but also okay with the process. I am not fearful because I am excited to see where life takes me in that time. However, I am scared to think about what I will not complete in my life. Will I look back and have years of regret? Will I be alone or will I lose my independence?

Quantitative Findings

Given that tests of significance could not be completed, descriptive information on the quantitative measures are provided to provide a snapshot of student attitudes and beliefs. On Survey 1, the average ageism score for the participants was mostly positive with a mean of 44.18 (range= 30-67). The average ageism score on Survey 2 was slightly lower at 42.67 (range=27-72). For both survey responses, none of the students approached the upper ends of the scale indicating that while they may have held some ageist beliefs, on the whole, the students rejected ageist statements. Similarly, students indicated a relatively high average likelihood of working with older people after finishing their degree ($M=4.48$; range 1-6), and on Survey 2 the average was nearly identical ($M=4.43$). Finally, students reported on average that their feelings about working with older adults changed somewhat. Specifically, 19 of the 28 students chose either “somewhat” or “a great deal” to describe the extent of their change while nine chose either “not at all” or “very little.” The item did not specify if this change was positive or negative; however, evidence from the open-ended questions suggested that if change occurred for a student that it was indeed positive (described below). This item was found only on Survey 2. Table 3 provides further descriptive information on these measures.

Table 3. Results of Quantitative Measures

Variable	Survey 1	Survey 2
Ageism	44.18 (9.15)	42.67 (10.80)
Likelihood of working with OA	4.48 (1.33)	4.43 (1.32)
Very unlikely	1 (3.0%)	1 (3.6%)
Unlikely	2 (6.1%)	1 (3.6%)
Somewhat unlikely	3 (9.1%)	4 (14.3%)
Somewhat likely	10 (30.3%)	8 (28.6%)
Likely	8 (24.2%)	7 (25.0%)
Very likely	9 (27.3%)	7 (25.0%)
Change in feelings about gero work	---	2.79 (1.07)
Not at all	---	5 (17.9%)
Very little	---	4 (14.3%)
Somewhat	---	11 (39.3%)
Great deal	---	8 (28.6%)

Open-ended Survey Items

On Survey 2, an item that asked students to discuss “why/why not would they work with older people” revealed two main themes amongst the 23 responses that were in favor of working with older adults. Nine students indicated that “people are people, young or old” even though society diminishes them. One student wrote,

I do believe that older adults are very valuable in society, a lot more valuable than we show them that they are. I think ageism and stereotypes fall heavily on this population. I think a lot of people are less sensitive to it, because we know that they are at the end of their lives. Many of their ailments tend to weigh heavily on those close who take care of them. Which may also breed towards an overall culture of resentment in a very individualistic society.

Seven students noted that they enjoyed working with older adults or were looking forward to working with older people. Five students included both of these two themes in their responses, such as this student,

Working with older adults appeals to me because this is a very underserved population. I have always enjoyed working with older people and feel like I would be a great advocate for the older adult. I also find older adults very interesting and am interested in helping them quality of life in their later years.

The final two students indicated that they did not want to work with older adults because they had chosen another field of practice.

On the item in Survey 2 that asked students to share any other thoughts that they might have on gerontological practice or the course, 15 students responded. Two of these responses were related to how practice with older adults is rewarding, while the other 13 responses were related to the course. Students indicated that it was a “great course,” and they “learned a lot.” Other students expressed increased comfort in working with older adults, that their opinions about older adults were shaped by the course, and “it opened my eyes to issues that I was not aware of.” One student further articulates this change,

The class was interesting and made me think about topics that are not really touched on, such as sexuality and prison among the elderly. I also became more aware of my own stereotypes of the elderly such as “how cute” they are. Moreover, I am more aware of my interactions among the elderly since this class and have a better understanding of the population.

Discussion

Results across the different measurement approaches indicated that students experienced a challenge to their thinking about older people, in particular cultural and individual stereotyping. These changes cannot be attributed to the photography activity in-and-of-itself. Rather, the shifts in thinking about gerontological work or about older people in general were likely the result of the combination of learning activities, including readings and lecture. However, the photo activities offered a way to incorporate a visual approach to stimulate critical thinking in an online course, and one that appeals to generational needs. Future research should seek to garner direct feedback on the activity itself. Anecdotally, several students included their thoughts about using images in their posts writing things such as this: “I thoroughly enjoyed looking at all the pictures that everyone felt was their definition of aging or getting older.” A more formal evaluation could elicit specific feedback on how to improve the activities.

The overwhelmingly positive attitudes toward older people amongst this group of students may be attributed to their positive contact with older adults or their previous work experience with older people given that the literature consistently points to these experiential factors as having a profound impact on attitudes toward gerontological practice (Allen & Johnson, 2008; Chonody & Wang, 2014; Chonody, Webb, Ranzijn, & Bryan, 2014; Goncalves, 2009). While this cannot be tested given the small number of participants, students reported spending time with an older person and that the relationship was good. Students also mentioned their previous work experiences (e.g., nursing assistant) in open-ended questions on the survey and related this to their desire to work in this field. Increased service learning and experiential activities with community dwelling older adults, such as intergenerational arts programs, are likely necessary to truly make an impact on students’ interest in working with older people (Chonody, 2015; Goncalves, 2009).

In both posts, students identified wisdom, knowledge, good stories, and the chance to learn from older people. The opportunity that gerontological practice offers to learn from older adults’ experiences is consistent with past findings that have highlighted this as one of the key benefits of working with older people (Webb, Chonody, Ranzijn, Owen, & Bryan, 2015). Similarly, the negative aspects of this practice area were realized in the images that students picked for their post; that is, showing older people who are infirm, dependent, sad, or lonely. In other student studies, these types of sentiments have also been found (e.g., Mason & Sanders, 2004; Webb et al., 2015). These results suggest that the photo activities can draw out the positive and negative sentiments expressed toward older people and practice in this area, which points to its utility in challenging students’ thinking about these issues. Future research should seek to test if these methods can challenge ageist biases when the activities are couched in a more general course (e.g., Human Behavior in the Social Environment; Introduction to Psychology/Sociology).

Limitations

The findings from this study must be considered within the context of its limitations. First, the number of participants in this case study was small and was drawn from one social work program in the Midwest. Results are not generalizable to other social work students; however, the results do point to a promising pedagogical activity that could be readily incorporated into an online course or modified and utilized in a traditional, face-to-face course. Additional research is needed to show its utility in other courses, and to better understand how these photo-activities may address issues of ageism or aging stereotypes.

Second, the inability to compare the quantitative measures from Survey 1 to Survey 2 was a limitation in this study. The development an anonymous survey with a mechanism for linking the surveys would have strengthened the design. However, it should be noted that the measurement approach chosen for this study may not have been sensitive enough to measure change for social work students who may be only experiencing subtle shifts in their perceptions of older people. In other words, items may be too blatant in their ageist sentiments for social work students (especially graduate students) who have received a substantial amount of education on social justice and oppressed populations. Relatedly, given this exposure, the inclusion of a social desirability scale would allow an assessment of student responding.

Conclusion

In sum, this pedagogical activity sought to couple critical thinking, self-reflection, and discussion to broaden student attitudes toward older adults and gerontological social work practice. Specifically, the aim was to facilitate the deconstruction of aging myths and the false dichotomization of young/old by challenging students' thinking about what it means to be "old" and how they perceive their aging process. This study adds to the burgeoning literature on evidence-based instructional techniques for online courses and the substantive knowledge base regarding attitudinal change amongst college students. Online pedagogy that facilitates critical thinking can be advanced through the development of innovative ways to engage students online by repurposing technology that they are already using.

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