

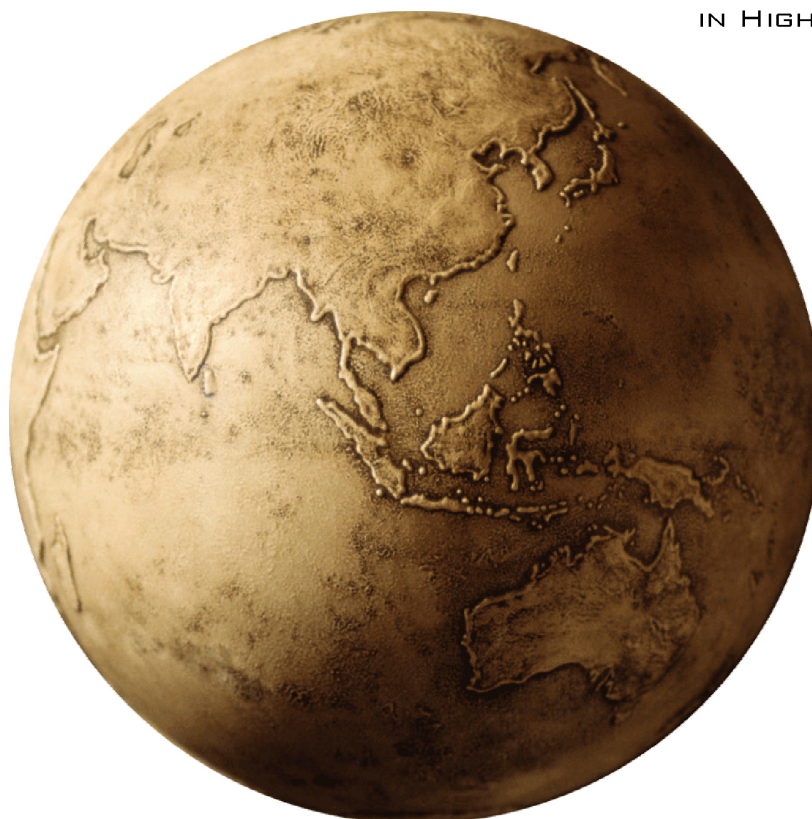
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IN HIGHER EDUCATION



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The International Journal of Teaching and Learning in Higher Education (ISSN 1812-9129) provides a forum for the dissemination of knowledge focused on the improvement of higher education across all content areas and delivery domains. The audience of the IJTLHE includes higher education faculty, staff, administrators, researchers, and students who are interested in improving post-secondary instruction. The IJTLHE is distributed electronically to maximize its availability to diverse academic populations, both nationally and internationally.

Submissions

The focus of the International Journal of Teaching and Learning in

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All submissions to IJTLHE must be made online through the Online Submission Form. In addition, all manuscripts should be submitted in English and in Microsoft Word format. The following Submission Guidelines pertain to all manuscript types, that is, Research Articles, Instructional Articles, and Review Articles. Ultimately, authors should follow the guidelines set forth in the most recent edition of the Publication Manual of the American Psychological Association (APA).

Review Process

Following a brief editorial review, each manuscript will be blind reviewed by two members of the Review Board. The review process will take approximately 90 days. At the end of the 90-day review process authors will be notified as to the status of their manuscripts - accept, revise and resubmit, or reject - and will receive substantive feedback from the reviewers. Manuscript authors are responsible for obtaining copyright permissions for any copyrighted materials included within manuscripts.

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Teaching Research Skills to Undergraduate Students Using an Active Learning Approach: A Proposed Model for Preparatory-Year Students in Saudi Arabia

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This study highlights how teaching a research methods course to undergraduate students can be a successful endeavor when active learning is the main method of learning and teaching. In this study, the effectiveness of using active learning in the experimental group to achieve the learning outcomes and final product of a freshman-year writing and research course was researched. The sample included two groups of female students (n=256 students), one control group (n=137) which received traditional lecture and assignment type instruction and one experimental group (n=119) which received instruction through active learning techniques. The effectiveness of active learning was measured by quantitative analyses of overall final exam scores and individual writing and research skills of the two groups. Results of the study indicated that active learning significantly improved the overall skills of the participants as demonstrated by an increase in final exam scores and individual writing and research skills. The research discusses the most and least improved skills, as well as pedagogical implications for teaching a writing and research course using active learning.

According to Hunter and Tse (2013), “Many students begin university studies with little or no knowledge of the principles underpinning academic discourse” (p. 227). One of the necessary skills within academic discourse is writing academic papers. Academic writing is perhaps the most difficult and last skill to gain fluency, but one of the most essential for students in the long run (Al-Buainain, 2009). For students with a first language of Arabic (L1), there are several factors which explain the challenge of academic writing in English (L2), including the absence of productive writing and lack of student-centered strategies in their prior educational experiences, i. e., K-12 education. In addition to academic writing, according to Hosein and Rao (2017), research skills in the undergraduate curriculum require additional instructional focus but are still being taught with pedagogical approaches that are “surprisingly teacher directed” (p. 109). To effectively implement a student-centered approach in writing and research skills—skills that require the ability to create and synthesize knowledge—students have to be engaged, responsible, and willing participants in their own learning process.

One of the methods that is known to be particularly effective in moving students to the center of the learning process is active learning (AL), which is defined thusly: “[S]tudents talk and listen, read, write, and reflect as they approach course content through problem-solving exercises, informal small groups, simulations, case studies, role-playing, and other activities – all of which require students to apply what they are learning” (Meyers & Jones, 1993, p. xi). As Saudi Arabia moves towards a knowledge-based economy and higher education is shifting from a teacher-centered to learner-centered learning paradigm (Lumpkin, Achen, & Dodd, 2015), students' skills to communicate effectively both orally and written while

being able to generate and synthesize knowledge and take responsibility for their own learning process are paramount (Dewing, 2008, p. 273).

In this paper, we explore how applying a student-centered approach through active learning to teach writing and research to undergraduate students with no prior research and limited experience in writing in English is an effective way to enhance students' writing and research skills. This study could be seen as providing a model, a “framework that highlights the critical role of practices, structure and formative feedback in the learner's preparation” (McAlpine, 2004, p. 119) for teaching writing and research skills in Saudi Arabia's preparatory year (a preparatory program offered in the first year at the university). This research also has possible broader international relevance because providing a student-centered method of teaching research methods to undergraduate students will help to fulfill an aim that is common to many higher education contexts worldwide.

General Context: The Preparatory Year in Saudi Arabia

Over the last ten years, Saudi Arabia's higher education institutions have planned and implemented preparatory programs in all state universities. These programs are part of the Kingdom's larger initiative to equip students with the necessary education and skills to facilitate a Saudi-led, knowledge-based economy. The preparatory program is a full academic year immediately after the student graduates from high school and before he or she chooses a particular program of study in the university. The aim of this year is to bridge the gap between high school and the university by preparing students for university-level studies and the higher-education social context

(Alaqeeli, 2014). As Alaqeeli explained, some of the objectives of the preparatory year include:

...increasing retention and graduation rates, enhancing institutional internal efficiency levels...rationalizing admission through proper students' guidance to various scientific disciplines, providing college students with the necessary language and practical skills,...improving and regulating institutional resources equipment and capabilities,...and preparing the student to engage in the academic, social and research aspects of university life (p. 46).

A detailed examination of these objectives is beyond the scope of this research paper. Nevertheless, it is worthwhile to gain an understanding of the rationale for the program and of the skills that are emphasized therein. Saudi high schools generally rely on memorization and rote learning as the predominant methods of instruction and ways of knowing (Alghamdi, 2013a, 2013b; Hamdan, 2005); these methods of teaching and learning have been the norm in Saudi Arabia (Smith & Abouammoh, 2013). Moreover, most high school curricula are primarily theoretical, and therefore most students graduate from high school with minimal skills and little more than "passive knowledge" to the extent that they are not prepared for the university context and for the broader Saudi and global environments. Consequently, the preparatory year program has been developed to emphasize many of the skills that are typically overlooked in high schools such as foundational English, mathematics, study skills, writing and research, leadership, communication, professional development, and technological skills.

Regarding English language skills, one of the foundational skills highlighted in the preparatory year, language proficiency differs based on students' prior educational experiences. Students who attended their primary and secondary years in private education have several classes of English per week from Kindergarten (number of hours and subjects vary from school to school) for a minimum of 12 years of English instruction with courses such as math and science taught in English. Public education students currently have nine years of English instruction beginning in 4th grade (*EF partners with Saudi Arabia*, 2013). Several international and Saudi schools have introduced international programs where English is the primary medium of instruction. Preparatory programs in Saudi higher education then assess and ensure that students have the basic foundation English language proficiency, learning, and communication skills, which is the foundation for the writing and research course discussed in this research.

Teaching Academic Writing Skills in English

Writing is a complex, yet essential skill to master in higher education as cited and researched in several studies. Indeed, "effective writing is 'central to the work of higher education'" (Monroe, 2003, p. 4, as cited in Hunter & Tse, 2013, p. 228), supporting the notion that academic writing is integral to all fields in higher education. In particular, some studies (such as Al-Khairi, 2013, p. 1; Javid, Farooq, & Gulzar, 2012; Javid & Khairi, 2011) have concluded that students with an L1 of Arabic in higher education require more development of English language skills, which tends to delay their academic progress. In addition to being an essential skill in academic communication, writing is the most complicated cognitive task (Smith, 1989; Widdowson, 1983); it requires careful deliberation, regulation, and concentration (Al-Khairi, 2013).

Researchers studying English (L2) academic writing for students who have an L1 of Arabic have traditionally focused on language-based errors: grammar, discourse markers, etc. However, increasingly, studies that highlight student-centered processes, learning foundations, and teaching implications for improving L2 academic writing skills have been the focus. One of the issues that is found in such research, which has teaching and curricular implications, is the lack of strong writing skills in the students L1 of Arabic, which makes English writing an even more difficult productive skill (Benseman, Sutton, & Lander, 2005). Al-Buainain's study (2009) on the written work of 40 Qatari university students highlights frequent errors for students with an L1 of Arabic in written English. The author posits that students are struggling in academic writing in Arabic, which can lead to challenges in their written English.

As academic writing is a learned, productive language skill, the lack of L1 academic writing proficiency highlighted by the literature suggests an absence or minimal teaching of student-centered approaches, be they active learning or another, in previous educational experiences.

Perhaps the most substantial commentary regarding academic writing in Saudi higher education is from university students themselves. Unrah and Obeidat's (2015) qualitative research focused on Saudi university students' adjustments to studying in the US. In the interviews, several participants agreed that, concerning academic writing, "[B]efore coming to the US, they did not learn to write in a systematic way. They were taught 'stream of consciousness' writing rather than a systematic method involving organization of ideas and content" (p. 51). In addition, the students also mentioned the emphasis on memorization in Saudi higher education. Regarding written language testing, one of the participants said, "[S]tudents would memorize five paragraphs and then would come to the

exam and write one of the paragraphs from memory" (p. 50). The authors' research emphasizes the absence of previous, organized academic writing instruction and even mention this as an implication for preparatory year instructors and administrators to consider when preparing for courses.

Further to this point and emphasizing specific kinds or purposes of academic writing, such as writing for research, Deraney's (2015) content analysis research focused on academic essays of 25 students in a Saudi preparatory program. The author concludes that students in preparatory programs appear to learn writing in an organized manner by genre (narrative, descriptive, argumentative, etc.), often for the first time, but are not consistently taught or assessed by the organization or writing skills needed in that genre explicitly. Hyland (2007) writes that in genre writing, students need to know the process and skills of writing in that genre as well as the language. Other studies concur that Saudi learners have limited experience in academic writing for specific purposes like narrative, extended essays, and expository essays (Al-Eid, 2000; Bersamina, 2009). This is relevant in this research as it highlights that teaching students to write in a specific way, for a specific purpose, such as writing for research is a beneficial pedagogical approach.

Therefore, academic writing in Saudi higher education is complicated for several reasons, including the lack of language skills in English and organized, academic writing in students' previous educational experiences. It seems that teaching academic writing, include writing and research, is highly valuable in the Saudi context and requires attention from professors and curriculum designers for several reasons. The model suggested in this study for teaching writing and research using the student-centered approach, active learning, could potentially help strengthen students' writing and research skills.

The Active Learning Framework

Active learning (AL) happens when "students explicitly participate in their attainment of knowledge. Students often have difficulty connecting concepts and principles learned in class to specific cases or other frames of references" (Vandiver & Walsh, 2010, p. 31). In other words, students actively learn by "doing" and explicitly "thinking" as they are doing (Bonwell & Eison, 1991, p. 2). One of the hallmarks of active learning is that students are engaged in advanced thinking patterns, which include production, assessment, and analysis. Lumpkin and colleagues (2015) write that, often in contrast to traditional lecturing, active learning includes "any activity encouraging students to participate in learning approaches engaging them with course material and

enhancing critical thinking as they make applications" (p. 123). The concept of "application" has played an essential role in providing a definition of active learning in a general context (Meyers & Jones, 1993).

This research, similar to other studies, considers active learning from the constructivist paradigm of student ownership and created learning experiences, those in which students appreciate and recognize engaging learning activities. Active learning draws on the learners' own initiative and sense of responsibility for their progress (Niemi, 2002, p.763). When students collaborate to explore information, they receive encouragement to take larger tenure of their learning. Lumpkin and colleagues (2015) discuss that responsibility for learning in an active, constructivist classroom "requires teachers who value maximizing opportunities for students to learn, while urging students to accept that what is learned in any course will always be their responsibility" (p. 121). The authors' research found that through the ownership of active learning, students' perceive learning as creating "positive connections between active engagement and learning" and classrooms that are "more academically productive and enjoyable" (p. 131). The researchers encouraged educators to include more active learning strategies and assessment in their classes.

According to Meyers and Jones (1993), the core of AL as is the commitment of the minds of learners in recalling and applying their former knowledge and in making connections between new knowledge and prior knowledge—deep rather than surface learning (Trigwell, Prosser & Waterhouse, 1999). Active learning moves beyond the superficial memorization and helps learners solve learning problems and connect and apply what they are learning; AL helps them to expand their learning abilities rather than just learn the discrete skills. Active learning then encourages students to create and share their knowledge, which can help them learn from each other, and it develops a community of learners (Scott-Ladd & Chan, 2008).

Active learning and academic writing and research are mutually beneficial. As shown in the literature, writing, in any form, is a productive, not receptive, skill and consequently requires constant engagement, writer responsibility, and the ability to synthesize and construct knowledge to create meaningful texts. Vandiver and Walsh (2010) write that "teaching students to think critically, contextually, and independently about the research process, including how research findings are generated and applied to social problems, serves to benefit both the individual and the society" (p. 31). Further, Hosein and Rao's work (2017) on student-centered pedagogies in research methods with undergraduates in the UK found that their use of reflective essays focusing benefitted their students'

understanding of the research process and their place in it. The authors conclude that "student-centered pedagogies can empower the students to find their researcher's voice and enable them to have that journey to self-authorship in their development as a student researcher" (p. 119). This process of reflecting on and connecting knowledge will help students grow not only as researchers, but in their fields as well.

In concurrence with the literature, Unruh and Obeidat's (2015) work with Saudi students studying abroad supports the need for the active learning approach in Saudi higher education in general. In the study's implications, the authors advise instructors to "explicitly teach metacognitive and comprehension skills. Saudi students are also accustomed to taking a more passive role in their education and may need encouragement, at first, to actively shape their own academic experiences" (p. 54). The authors' call to teach metacognitive skills highlights the need for active learning that requires student-centered engagement and responsibility in Saudi higher education. Barnawi's (2016) work with Saudi students negotiating writing pedagogies in a college writing classroom further supports the idea of active learning. The author concludes that through active scaffolding and negotiated writing pedagogies, his students moved "from writing to display knowledge to writing in order to construct and transform knowledge, at levels such as self, content, and form" (p. 1).

Therefore, students' acquisition of skills and knowledge are better served if they learn about writing and research in an active, student-centered manner rather than in a passive, instructor-centered one. Active learning includes several techniques such as demonstration, collaboration with peers, presentations, debates, and cooperative/collaborative activities (Lammers & Murphy, 2002). All of these strategies were implemented in teaching the writing and research methods course in this research.

This research reports the possible model of using active learning on teaching academic writing skills, in this case, writing and research, in the preparatory program. A multiple-choice final exam aimed at 14 different skills was used to measure the skills. The research aims to answer two main questions and the implications of those answers:

1. Is there a difference in students' writing and research overall skills, as shown by performance scores, when taught using active learning as compared to those students who received traditional instruction?
2. In individual writing and research skills, is there a difference in students' performance scores considering the active learning and traditional methods?

Method

The study was conducted through a quasi-experimental design. Students were divided into two groups, experimental and control. The experimental group received instruction via active learning techniques while the control group received traditional instruction via lectures, assignments, and exams. The overall performance and individual writing and research skills were measured at the end of the course by a multiple-choice final exam based on 14 writing and research skills.

Setting

The research was conducted with participants from two universities, one public and one private, in Saudi Arabia. Both private and public were considered to expand the sample size and to produce more generalizable results. Students graduate from secondary school in either the Science Track or the Arts Track, depending upon their interests and plans for further education or employment. Education in Saudi Arabia is gender segregated; male professors teach men, and female professors teach women. Therefore, as the authors are female, this study was conducted on the women's campus only. The courses were taught by one instructor during the

Writing and Research Course

Students were required to take the writing and research (WR) course as part of their program of study. At the beginning of the semester students are given suggestions and a list of possible research questions, or they can develop their own research question: preferably one that is relevant to their social, community, or campus context. Some of the research topics selected previously include the effect of text language on students' academic writing, controversial speakers on the university campus, freedom of expression, the use of housemaids for raising children, and the choice for female students between marriage and higher education. The instructor emphasized five broad aspects of learning: (a) the identification of, analysis of, and responses to a problem; (b) the requirement to discover something new through problem solving; (c) the acquisition of an understanding of the material at a profound level by finding creative solutions; (d) the requirement for cooperation, mutual support, and teamwork; and (e) the appropriate utilization of technology in order to find an answer. Through these five broad areas, 14 writing and research skills, shown in Table 1, based on the learning outcomes are covered with the end result of a 3,500-5,000-word research paper.

Table 1
Writing and Research Course Skills

Skills
1. Differentiate between qualitative and quantitative research types
2. Write an academic research title accurately and correctly
3. Write a research proposal
4. Prepare an annotated bibliography before writing
5. Debate subject of research with peers or subject professor
6. Search on topic and keywords in Arabic and English search engines
7. Write about previous studies (basic literature review)
8. Write research introduction using specified criteria
9. Use APA format, citation and references
10. Write research hypotheses and questions
11. Use appropriate, basic statistical methods
12. Write and interpret results of appropriate research tools
13. Choose the research problem
14. Design appropriate research tools (survey, questionnaire, etc.)

Participants

All of the participants were female, ages 18-21, and enrolled in a first-year, English-language writing and research course. The participants were all female because the researchers have access to this population: as mentioned previously, education is gender-segregated in Saudi. The participants were those who agreed to participate in the research and who were enrolled in the course during the data collection from 2010-2012. The total number of participants were 256 (n= 137 in the control group; n=119 in the experimental group). The first language of the students (L1) was Arabic. An important note regarding the medium of instruction is that students must complete either the foundational preparatory year English language program or IELTS level 5.0 in writing of English language proficiency before being enrolled in the course.

Instrument

All students were provided the same 20-question multiple-choice final exam regardless of which group, experimental or control, to which they were assigned. The test instrument was formed by the primary researcher and checked for content validity by two professionals in ESL and education. The topics for the exams were based on the main topics and skills covered in the course syllabus shown in Table 1. While the format was multiple choice, the questions presented students with high-level choices and scenarios such as,

"Which of the following is considered a poor thesis statement?," "Choose two acceptable academic titles from the following," and "Quotes should be used in your research paper to..."

Procedures

After the two groups were taught using the respective method, active learning or traditional lecture, the students were given the same final exam based on the 14 skills. The average scores of the two groups were then compared overall on the final exam and individually on the skills using descriptive statistics and a paired t-test. Based on the exam scores, the rank of skills (highest to lowest) was determined.

Experimental group. The experimental group was taught using active learning strategies from the beginning until end of the course. The students developed research papers and were engaged in all stages of the research process. The students chose their topics based on several examples, personal interest, and future career goals, which were then discussed in class and individually approved by the instructor. This was followed by a class visit to the library to conduct research using databases, various peer-reviewed sources of data including journal articles, and online books in order to write a research proposal. Every week there was a discussion about part of the research, such as the abstract, the introduction, the literature review, the selection of books and peer-reviewed articles, search engines, APA citation, research tools and methods, and

the final research report. The research paper was completed in stages with due dates and criteria from topic selection, proposal, introduction, literature view, etc., resulting in an eight-tiered assignment structure. This encouraged the students to be actively engaged in the writing of their research papers. Even though this took a long time, it was a meaningful experience. This method of turning in material in stages prevented plagiarism, as the students were required to be actively engaged with the contents of their paper on a weekly basis. At the end of the term each student was required to present her research findings to the class and to answer questions from the professor and the other students in the same manner as a researcher presenting a paper at an academic conference. Throughout the course the students were encouraged to discuss their research findings with their classmates and their professor both inside and outside the classroom; the latter approach was facilitated by Blackboard Discussion Forum. The students were given an additional incentive to participate in the online discussions because 10 percent of the final grade was based on the level and quality of their participation on the discussion board. This participation is considered to be an aspect of AL because it involves engagement in helping others and in sharing knowledge.

Control group. The control group was taught using the traditional method which involved primarily lecturing to transfer knowledge about how to write an academic research paper. Students were given lectures on each part of the research process with brief discussion accompanied by a PowerPoint in each class with limited time for asking questions. The students received assignments throughout the course, and the research paper was turned in at the end of the term.

Validity

Content validity of the final exam was identified by three academic professionals, one of whom was the researcher, who reviewed and revised the final exam prior to testing. For grading, as the instructor of both the groups was the same, it was imperative to estimate the inter-rater reliability. Two academic colleagues with extensive experience and doctorates in English Language and Literature and Teaching English as a Second Language (TESOL) scored the final exam. The inter-rater correlation for the final exam was .99.

Results and Discussion

This research investigates two main questions and their implications:

Question 1: Is there a difference in students' writing and research overall skills as shown by performance scores when taught using active learning as compared to those students who received traditional instruction? The results show that there is a statistically significant difference between the average scores of students from the experimental group (taught using active learning) and students from the control group (taught using traditional techniques of education) when comparing final exam performance scores as shown in Table 2. This result is also in agreement with those of other studies that indicate that AL techniques improve students 'level of significance' in the material of the course (Taylor, Anderson, & McConnell, 2003).

While other factors, such as level of language proficiency and educational background, may have contributed to the differences between the control and experimental group, the data supports the literature showing the effectiveness of active learning. As the questions on the exam were primarily application and scenario questions, deep rather than surface learning (Trigwell et al., 1999) was activated, and students had to apply what was learned in the classroom.

Question 2: In individual writing and research skills, is there a difference in students' performance scores between the active learning group and traditional methods group?

As shown in Table 3, the data illustrates that there is a difference in each of the 14 writing and research skills between the experiment and control groups. Those students taught via active learning made significant gains, with an average of 10.5-point higher score in the skills, than those taught with lecture-based instruction.

The skills with the highest difference between control and experimental group, as shown in Figure 1, are skills 6 (19.27-point difference; $t = 13.32$) and 12 (19.08-point difference; $t=12.99$). Searching topics on search engines (skill 6) requires application of skills and evaluation of sources. Writing and interpreting results of research (skill 12) requires not only application but synthesis of skills gained and some creation of new material in writing results.

Table 2
Final Exam Averages for the Control Group and Experimental Group

	Mean	SD	<i>t</i> value	Level of Significance
Control group	77.04	16.49	6.47	0.01
Experimental group	89.93	15.16		

Table 3
*Control and Experimental Group Scores in Each of the 14 Writing and Research Skills**

Skills	Control group n=137		Experimental group n=119		t value
	Mean	SD	Mean	SD	
1. Differentiate between qualitative and quantitative research types	81.02	13.15	94.10	8.26	9.56
2. Write an academic research title accurately and correctly	78.56	12.96	87.99	17.39	4.52
3. Write a research proposal	87.63	11.39	99.71	13.10	7.89
4. Prepare an annotated bibliography before writing	70.43	10.74	82.39	10.39	9.02
5. Debate subject of research with peers or subject professor	87.35	10.35	92.70	12.52	3.74
6. Search on topic and keywords in Arabic and English search engines	80.47	10.94	99.74	12.04	13.32
7. Write about previous studies	76.91	19.23	82.45	21.45	2.25
8. Write research introduction using specified criteria	77.57	6.84	83.25	11.53	4.85
9. Use APA format, citation and references	82.64	12.89	88.93	13.89	3.75
10. Write research hypotheses and questions	85.37	8.79	89.97	7.80	4.39
11. Use appropriate, basic statistical methods	77.53	11.94	93.99	15.33	9.13
12. Write and interpret results of appropriate research tools	80.63	12.39	99.71	11.10	12.99
13. Choose the research problem	86.44	10.77	92.39	9.30	4.74
14. Design appropriate research tools (survey, questionnaire, etc.)	74.30	10.80	89.70	11.52	10.98

* $\alpha=.01$

The skills that showed the least difference were skills 7, 5, and 9 respectively. Debating research topics with peers and professors (skill 5 with a 5.35-point difference; $t=3.74$) is hard to test on an exam, and the minimal difference could be attributed to an oral communication course which is required of all students before this course. Similarly, skill 9 (6.29-point difference; $t=3.75$), using APA format, can be taught through lecture and worksheets and requires little discussion: APA referencing and formatting can be memorized. However, noticeably, skill 7 (5.54-point difference; $t=2.25$), writing about previous relevant studies which requires application, evaluation and other active skills, also showed minimal gain. Perhaps, this is a difficult skill for both groups to gain in one semester, whether taught through active or traditional learning,

and the exam question(s) focusing on this skill could need modification as the standard deviation for both groups is the highest of all 14 skills.

Further in relation to answering Question 2, the skills were ranked according to average performance scores for the experimental group as shown in Table 4. Searching topic and keywords in Arab and English search engines, writing a research proposal, and writing and interpreting results of appropriate research tools had the highest skill rankings with very similar scores within a range from 99.74-99.71.

On the other end of the ranking, writing a research introduction using specific criteria, writing about previous studies (basic literature review), and preparing an annotated bibliography before writing ranked 12-14 respectively with scores ranging from 83.25-82.39.

Figure 1
Comparison between control and experimental group mean scores in each of the skills

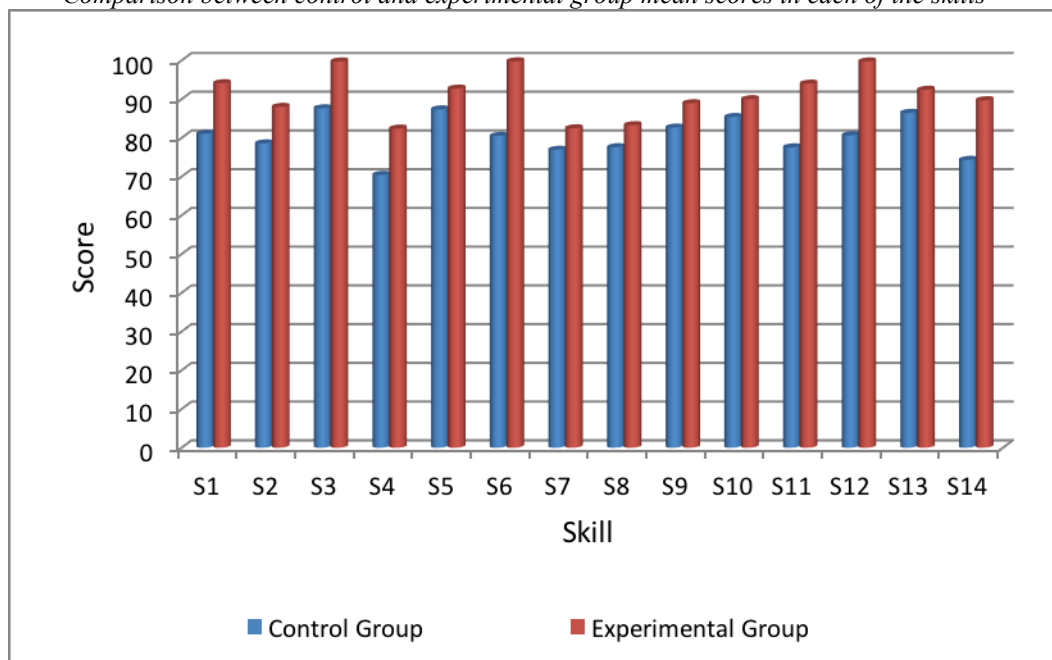


Table 4
Average and Ranking of the Experimental Group's Writing and Research Skills

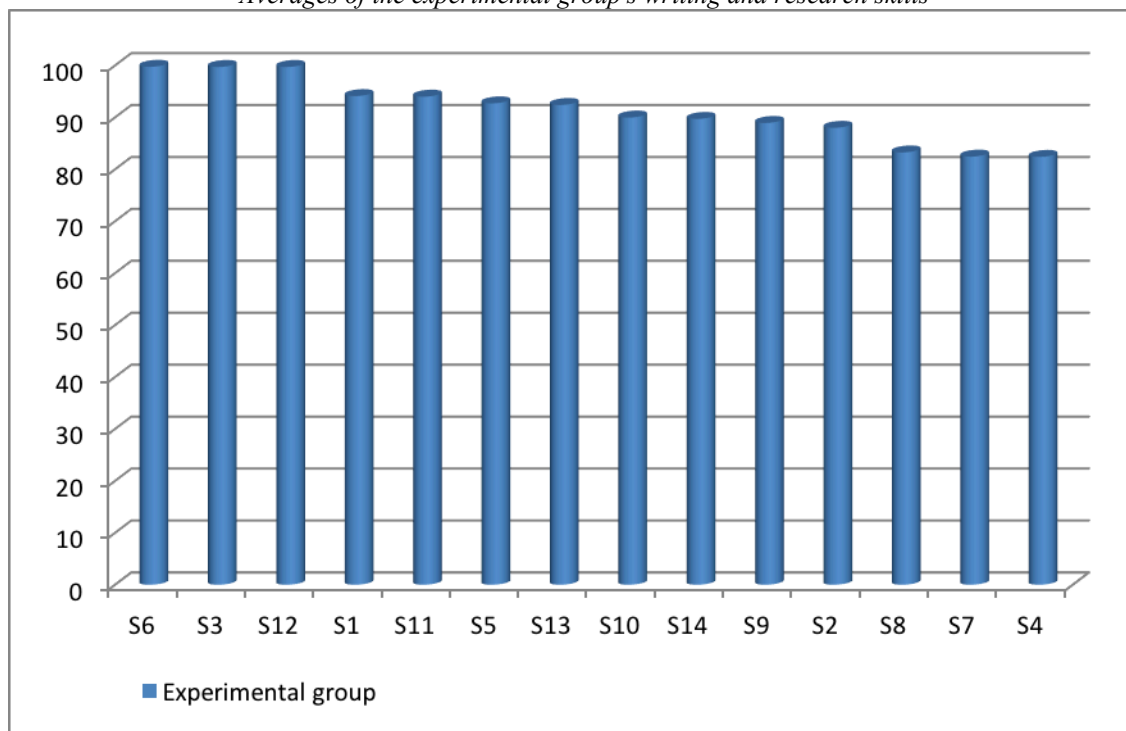
Skills		Average	Standard Deviation	Ranking
1.	Differentiate between qualitative and quantitative research types	94.10	8.26	4
2.	Write an academic research title accurately and correctly	87.99	17.39	11
3.	Write a research proposal	99.71	13.10	2
4.	Prepare an annotated bibliography before writing	82.39	10.39	14
5.	Debate subject of research with peers or subject professor	92.70	12.52	6
6.	Search on topic and keywords in Arabic and English search engines	99.74	12.04	1
7.	Write about previous studies	82.45	21.45	13
8.	Write research introduction using specified criteria	83.25	11.53	12
9.	Use APA format, citation and references	88.93	13.89	10
10.	Write research hypotheses and questions	89.97	7.80	8
11.	Use appropriate, basic statistical methods	93.99	15.33	5
12.	Write and interpret results of appropriate research tools	99.71	11.10	3
13.	Choose the research problem	92.39	9.30	7
14.	Design appropriate research tools (survey, questionnaire, etc.)	89.70	11.52	9

Figure 2 shows the ranking of scores and the consistency in the highest three and lowest three skills.

Preparing an annotated bibliography, writing an introduction, and reviewing literature while formulating

a research hypothesis proved to be difficult for both groups, which is not surprising based on the literature which suggests that typically Saudi students, in prior educational experiences, have not been taught

Figure 2
Averages of the experimental group's writing and research skills



systematic and organized writing (Unrah & Obeidat, 2015). However, these skills, particularly reviewing scientific studies in their field, are useful tools which guide students toward overall research objectives (Ball & Pelco, 2006, p. 147). As shown by the results, these three skills showed gains with active learning instruction but limited improvement, implying that more practice and critical thinking is required in the students' prior and current educational experiences.

Conclusion and Implications

In this study, students who were taught using an active learning pedagogy showed improvement in overall writing and research skills. This course offered the experimental group the experience of active learning, which was embraced by the students through increased interest and motivation (Bonwell & Sutherland, 1996; Robinson, 2000). Throughout the term students in the experimental group were coached by their instructor using AL to produce bits and pieces of the research paper. Thus, they were able to see the full picture of what is required to collect data and to write an academic-level research paper. Moreover, the students' grammar, sentence structure, and overall writing—which were not measured from the final exam but were observed during the course of each semester—

developed on a weekly basis, which leads to limitations as well as implications of this research.

Future research regarding writing and research skills could expand to focus on the content of the final research project. Also, a larger sample size including both male and female students could be researched for more generalizable results. Further, the students' perceptions on this approach, active or traditional, can be considered prior to and after the actual instruction. It is important for the students' overall monitoring of their own learning to know which approaches lead to enhanced learning and reflection.

One positive instructional implication from the study is that the students who were taught using AL exhibited a high level of autonomy. According to Vandiver and Walsh (2010), "Autonomous learning has been defined as the ability to take charge of one's learning. This form learning is connected with the students who took an active role in learning process...the autonomous learner is viewed as an independent, self-directed lifelong learner..." (p. 32). The students in the study showed that they could work independently to produce writing and research skills more proficiently than those taught using traditional methods. In the end, students learned how to conduct original research by utilizing AL strategies and skills.

Finally, and perhaps most significantly, a model for teaching writing and research is highlighted by the study. Any model for teaching WR, shown by the lowest ranking skills for the experimental group, the productive skill of writing—writing proposals, annotated bibliographies, and introductions—all require a “formula” or genre instruction and more productive practice through active learning and reflection. As shown through the literature, the students' writing in their L1 or previous experiences in L2 have been limited, particularly in genre or purposeful writing instruction. At the end of the term, several students reported that they would not have been able to write an academic research paper all at once and that the eight-tiered assignments helped them greatly to do hands-on work rather than passively listen to lectures as in a traditional class setting. These assignments within the framework of active learning could form a model to further produce meaningful student writing and research.

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Postsecondary Online Students' Preferences for Text-Based Instructor Feedback

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Misalignment between student preferences and instructor practices regarding writing feedback may impede student learning. This sequential explanatory mixed-methods study addressed postsecondary online students' preferences and the reasons for their preferences. A survey was used to collect 93 responses from postsecondary students attending a large private online university; data collection included interviews with a subsample of 4 participants. Findings indicated students preferred proximal, detailed, supportive feedback to enhance their writing skills and to understand deductions assessed by instructors. Findings may increase instructor awareness of students' preferences and enhance collaboration in the feedback process to promote writing skill development and improve academic outcomes.

Researchers have explored postsecondary students' preferences for various types of instructor feedback including written, audio recorded, and video recorded (Bilbro, Iluzada, & Clark, 2013; Crews & Wilkinson, 2010; Ice, Swan, Diaz, Kupczynski, & Swan-Dagen, 2010). However, most of the research has been done with students attending brick-and-mortar institutions. Several researchers affirmed the importance of instructor feedback to student learning in the postsecondary setting (Johnson & Cooke, 2015; Mirzaee & Hasrati, 2014; Van der Kleij, Feskens, & Eggen, 2015). Instructor feedback could undermine learning if the tone and content are not perceived by students to be supportive (Carless, 2006). Also, discrepancies in belief systems between teachers and students could disrupt the learning process (Schulz, 2001). Ferguson (2011) acknowledged the occasional dissatisfaction reported by students regarding feedback and asserted that instructors' understanding of students' preferences is essential to the learning process. Schulz (2001) agreed that instructors should explore students' feedback preferences and should address conflicts that could impede learning. Instructors need not strive to please their students (Smith, 2008); however, instructors may increase the likelihood of student learning by using strategies that enhance student engagement such as demonstrating awareness of students' feedback preferences. Given the increasing number of students matriculated in online programs (Cavanaugh & Song, 2014), describing online students' preferences for electronic feedback delivered via software applications such as Microsoft Word may help instructors serve students' learning needs more effectively (Nicole & Macfarlane-Dick, 2006).

Background

Numerous studies have addressed postsecondary students' perceptions and preferences regarding instructor feedback. Several researchers reported that postsecondary students' preferred clear, detailed

comments (Ferguson, 2011; Glover & Brown, 2006; Mulliner & Tucker, 2015;), suggestive rather than directive comments (Can, 2009; Rae & Cochrane, 2008; Treglia, 2008), electronic feedback (Can, 2009; Rae & Cochrane, 2008), prompt feedback (Mulliner & Tucker, 2015; Poulos & Mahony, 2008), and a balance between positive and negative comments (Duncan, 2007; Smith, 2008; Weaver, 2006). Studies also indicated that active students were more inclined to review and apply instructor feedback than passive students (Wingate, 2010; Zacharias, 2007). Students preferred feedback that aligned with assignment criteria (Ferguson, 2011; Weaver, 2006; Wolsey, 2008) and enhanced their performance on upcoming assignments (Orsmond & Merry, 2011). Studies done with English as a foreign language (EFL) students indicated that students' preferences appeared to be associated with their literacy levels (Boram, 2009; Tabatabaei & Ahranjani, 2012). However, most of the studies done on postsecondary students' feedback preferences addressed students attending brick-and-mortar institutions. Few studies addressed online students' preferences (Cavanaugh & Song, 2014; Gallien & Oomen-Early, 2008).

Detailed, meaningful instructor feedback adds value to the learning process, and instructors working in an online environment should consider how their feedback may enhance their students' writing skills (Crews & Wilkinson, 2010). Wolsey (2008) and Nordrum, Evans, and Gustafsson (2013) agreed that instructor feedback plays an important role in the formative learning process that occurs within individual writing projects and also in the development of skills that students will employ in future assignments. Feedback is the most personal, specific, and direct way in which students are given writing instruction (Szymanski, 2014). Weaver (2006) agreed that feedback stimulates student reflection and development and is an essential part of the learning process. Weaver also noted that identifying students' strengths and weaknesses may facilitate their self-assessment and application of feedback to future writing assignments.

Purpose, Framework, and Research Questions

The purpose of this study was to describe undergraduate- and graduate-level online students' preferences for instructor feedback delivered electronically via software applications such as Microsoft Word. The purpose also included describing reasons why students prefer certain types of feedback rather than others. An additional purpose had been to test for variation among online students' preferences based on age, grade level, online experience, and English-language status; however, due to the lower than expected sample size and the disproportionate representation of graduate students, native English speakers, and experienced online learners in the self-selected sample, this third purpose could not be satisfied.

Vygotsky's (1978) social-constructivist theory provided a suitable framework for the study. Vygotsky argued that learning promotes internal developmental processes that occur only when the student is collaborating with individuals in his or her environment. The current study applied social-constructivist principles by encouraging instructor recognition of the significance of students' preferences in the instructor-student relationship (Benko, 2012) and by exhorting instructors to engage with students in the recursive writing process by embracing their preferences as essential to their writing skill development (Budge, 2011; Ferguson, 2011). Instructor feedback was situated as a scaffolding tool used to move students through their zone of proximal development as emerging academic writers (Benko, 2012; McCarthy, 2015). Instructor feedback increases students' self-regulation as writers and thinkers (Treglia, 2008) and promotes learning by enhancing students' self-regulation, improving their motivation, and reducing their anxiety (McVey, 2008). Szymanski (2014) supported the use of professional-genre assignments that promote undergraduate students as apprentice writers and encourage their self-regulation as emerging scholars. When viewed through a social-constructivist lens, the purpose of the current study was to describe online students' preferences for different levels of scaffolding and to explore their reasons for preferring certain types of feedback rather than others. The study addressed the following research questions:

1. What types of electronic feedback in word-processing software do postsecondary online students prefer?
2. What reasons do postsecondary online students give for preferring certain types of electronic feedback but not others?

Method

The study included a sequential explanatory mixed-methods design with a survey questionnaire containing closed and open-ended questions followed by interviews with participants to probe their preferences more deeply (Patton, 2002). Survey questions were adapted from those used by Budge (2011) and Wolsey (2008); permission was obtained prior to the study. Survey data came from 93 undergraduate and graduate students attending a large private online university in the Midwestern United States. Four participants who completed the survey also participated in semi structured interviews. Interview participants came from different programs (psychology, education, nursing, and public policy) to enhance disciplinary representation in interview data.

The survey instrument contained 17 quantitative questions and two qualitative questions (Appendix A). The first 12 quantitative questions addressed students' preferences for online feedback delivered via software applications such as Microsoft Word. Silva (2012) noted that "electronic feedback via Microsoft Word comments...affords the reader nearly an infinite amount of space to provide commentary" (p. 3). Silva conceded that video technology provides similar advantages but expressed concern about instructors' willingness to spend extra time on video feedback and cautioned that the size of video files may limit delivery options. Silva acknowledged that audio comments may be used to personalize the feedback process; however, technology issues may impede students' reception of audio feedback. In addition, the lack of proximity of audio comments to essay text may reduce the impact of audio feedback on student revisions and learning. Given the predominant use of text-based feedback in online programs, quantitative survey questions addressed students' preferences for text-based feedback. However, two open-ended questions were included to allow students to report their preferences for other types of feedback, including video and audio. The survey also included five questions addressing participants' age, grade level, online experience, English-language status, and area of study. Interview questions (Appendix B) were aligned with survey questions to explore participants' feedback preferences and the reasons for their preferences.

Data Analysis

Descriptive frequencies were used to report quantitative survey data findings. Analysis of open-ended survey questions involved a structured yet flexible approach consistent with Miles, Huberman, and Saldana's (2014) recommendation to use both deductive coding based on the conceptual framework and inductive coding to identify unanticipated themes that emerged from the

data analysis. Preliminary analysis included provisional codes borrowed from Aliakbari and Toni's (2009) study comparing the influence of different types of error-correction techniques on postsecondary EFL students' grammatical accuracy: (a) direct coded, (b) indirect coded, (c) direct uncoded, and (d) indirect uncoded.

Quantitative Results

Demographic data indicated most participants (95.6%) identified as graduate students. When asked whether English was their first language, most participants (89.0%) answered yes. Regarding area of study, most participants selected social sciences (36.3%), health sciences (24.2%), or other (33.0%). In this third category, most participants (23) identified education as their area of study. Additional categories included business (3.3%), humanities (2.2%), and information technology (1.1%). When asked how many online courses they had taken, most participants (84.6%) answered four or more. Most participants (76%) were between the ages of 30 and 54.

Participants strongly agreed (63.4%) or slightly agreed (20.4%) with having instructors correct errors using track changes. Participants also agreed (95.7%) with having online instructors include comments to explain their corrections. Most participants (77.4%) preferred balloon comments in the margins of the paper, with less than a quarter (20.4%) preferring comments typed within the essay text. Most participants were neutral (34.4%) or strongly disagreed (19.4%) with the use of grammar codes. Participants (92.4%) preferred that instructors include both comments and corrections in their feedback. Most participants (58.1%) preferred comments inserted throughout the paper, and over a third (37.6%) preferred comments inserted throughout the paper and at the end.

Participants (91.4%) reported that they always review their online assignments for feedback from their instructor. In addition, participants strongly agreed (67.7%) or slightly agreed (15.1%) that electronic feedback provided by online instructors had been helpful in developing their writing skills. Results were mixed in response to Survey Question 9, "Considering the types of instructor comments listed below, which ones do you prefer?" Participants were allowed to choose more than one response. The most popular choices were explorations (85.0%), corrections to content (81.7%), and complex affirmations (73.1%). The least popular choices were personal reflections (24.7%), simple affirmations (32.3%), and observations (43%). Table 1 shows a breakdown of participants' responses to this question.

Most participants (82.8%) preferred online instructors to include grading rubrics with their feedback. In addition, most participants strongly agreed

(51.6%) or slightly agreed (24.7%) that their instructors' electronic feedback had been consistent with the grading rubric. Most participants strongly agreed (64.1%) or slightly agreed (25.0%) that their English writing skills were very good.

Qualitative Survey Results

Nearly all of the 93 survey participants responded to the two open-ended survey questions. Major themes contained 20 or more participant comments, and minor themes contained at least two but not more than 19 participant comments. Major themes included the desire to improve writing skills and the preference for proximal, detailed, supportive feedback.

Theme 1: Desire to Improve Skills

The dominant theme from the qualitative data was desire to improve as academic writers. Participants expressed an interest in using instructor feedback to develop their writing skills. Data showed 61 responses included a comment reflecting a desire to improve. One participant reported, "Feedback is how students learn and grow in their writing and understanding of information. I cannot become a better writer and learn if I do not receive feedback that helps me do both of these things." A second participant commented, "I like to know what I am doing wrong with recommendations to improve," and indicated, "I appreciate feedback that is meaningful. For example, if I make a mistake or do something wrong, I need to know about it so that I can improve."

Theme 2: Proximal Comments

Many participant responses (53) indicated that instructor comments should be located near related essay text. Approximately one fourth (14) of these responses indicated that proximity was important but did not specify the desired location (e.g., marginal balloons or within paragraph text). One participant reported, "I prefer to receive electronic feedback from my online instructor within the body of my essay." Another observed, "With comments not associated with a specific part of my paper, I am not sure what the instructor is talking about. It helps to have the comment be located in the location being referenced." According to a third participant, "It is important for me to have feedback posted throughout the paper rather than a long comment at the end. This makes the comments and corrections more concise and clear and easier to follow." A fourth participant commented, "I prefer the feedback directly adjacent to the error or the section being referred to in order to avoid confusion."

Nearly half (26) of the responses in Theme 2 indicated a clear preference for marginal balloon comments. Only one of the 93 participants indicated a

Table 1
Preferences for Types of Instructor Comments

Response	Number	Percent
Simple affirmations	30	32.3
Complex affirmations	68	73.1
Explorations	79	85.0
Personal Reflections	23	24.7
Clarifications	58	62.4
Observations	40	43.0
Questions	59	63.4
Corrections to content	76	81.7
Corrections to mechanics	57	61.3

preference for in-paragraph comments rather than balloons. Ten responses in this theme indicated a preference for both in-text comments and a long comment at the end. Two responses indicated preference for comments only at the end.

Theme 3: Clear, Detailed Feedback

Many participant responses (37) indicated a preference for instructor feedback that is easily comprehended and substantive. One participant reported, "I dislike simple feedback that does not provide a substantive critique of my work. A 'good job' or 'it needs work' does nothing to improve my comprehension or writing skills." Another participant commented, "I would like that my online instructor's feedback was substantial, productive, encouraging, clear, concise, and precise." A third participant added, "It is essential to have detailed feedback when working at the doctoral level. This feedback should include specific detail to errors, content that needs additions and/or omissions, and simply learning from the instructor's expertise."

Theme 4: Constructive, Supportive Feedback

The fourth major theme (28 comments) was that instructor feedback should be delivered with a supportive tone. One participant insisted that instructors should "eliminate value loaded bias comments. Give me direction, not insult. Let me use my own mind—nudge me the right way so I learn." Another participant reported, "I believe various instructors take liberties to insult and complain. I do not want to be the recipient of someone's bad day." A third participant commented, "It is important for me to know that my instructors care about my learning and growing rather than how many errors they can find."

Minor Themes

Several responses (18) indicated support for electronic feedback delivered as attachments or links

within courses or via e-mail. Participants described the convenience and efficiency of electronic feedback. Eleven responses indicated a preference for rubrics to clarify how the grade was determined, and seven comments reflected a preference for track changes delivered via Microsoft Word to promote error correction and skill development. Seven responses indicated that feedback should be delivered in a timely manner, and five comments indicated that instructor feedback should include information explaining why points were deducted. Four responses indicated that instructors should include examples with their feedback, and three comments indicated that substantive feedback is needed even though a good grade was given. Three responses indicated that instructors should avoid personal reflections in their feedback. No qualitative survey comments indicated a preference for video or audio feedback. Table 2 shows the number of comments associated with major and minor themes.

Interview Results

Consistent with a sequential explanatory mixed-methods design (Creswell & Plano Clark, 2011; Teddlie & Tashakkori, 2009), interview transcripts were analyzed using survey data codes as provisional codes. Provisional codes preselected from Aliakbari and Toni's (2009) study were abandoned in the analysis of survey data. However, provisional codes that emerged from the survey data analysis were useful in the examination of interview data.

Interview data supported all four major themes from the qualitative survey data. Interview responses also supported four of the minor themes, including rubric feedback, timely feedback, feedback needed to justify deductions, and feedback needed despite a good grade. In addition, two new themes emerged from the interview data: (a) include references to external resources, and (b) provide evidence that the instructor read the paper. One participant commented, "What has

Table 2
Themes From Qualitative Survey Data

Theme	Number of responses
Desire to improve skills	61
Proximal feedback	53
Clear, detailed feedback	37
Constructive, supportive feedback	28
Electronic feedback	18
Rubrics included	11
Track changes used	7
Timely feedback	7
Feedback to justify deductions	5
Examples included	4
Feedback needed despite good grade	3
No instructor personal reflections	3
No grammar codes	2

helped is when they refer me in their comments to other research or back to the literature of the course.” A second participant noted, “What I found most helpful were very specific references. A couple of professors were very good with specific reference citations especially when it has to do with APA.” Another participant mentioned, “It’s helpful when you see the comments that they actually looked at the paper.”

Discussion

Misalignment between instructor practices and student preferences in the writing feedback process may impede student learning (Schulz, 2001). Minimal research on postsecondary online students’ preferences for text-based feedback prompted the current study. Findings showed that qualitative survey results were consistent with quantitative survey results. Qualitative responses indicated that participants preferred proximal, detailed, supportive feedback including rubrics, track changes, and examples to help them improve their writing skills, but participants did not want grammar codes or instructors’ personal reflections. Qualitative survey results also indicated that feedback is needed even when the grade is good and to justify deductions. Quantitative findings showed that participants preferred proximal comments, rubric feedback, and the use of track changes for corrections. Quantitative results reinforced the preference for detailed feedback provided via complex rather than simple affirmations. Interview findings supported survey findings. Interview participants commented that detailed feedback is needed to provide evidence that the paper had been read and to improve writing performance on upcoming assignments. Interview participants also reported that instructor feedback should identify resources such as websites students can access to promote their skill development.

Most of the themes aligned with results from previous studies. The preference for clear, detailed feedback was consistent with findings from Can (2009), Duncan (2007), Ferguson (2011), Glover and Brown (2006), Mulliner and Tucker (2015), Rae and Cochrane (2008), and Zacharias (2007). Riddell (2015) noted the significant body of research supporting detailed feedback as more effective than general feedback in enhancing writing performance. Students who received personalized feedback scored significantly higher and were more satisfied with the course than those who received collective feedback (Gallien & Oomen-Early, 2008). Personalized feedback on related assignments may be especially helpful in enhancing skill development (Vardi, 2012, 2013). According to Poulos and Mahony (2008), effective feedback is timely and specific to the student’s individual needs.

A strong preference for supportive feedback aligned with findings from previous studies. Mulliner and Tucker (2015) found that feedback should be delivered in a constructive, supportive manner. Weaver (2006) noted that tutors should monitor their response styles and balance positive feedback with critical feedback while ensuring that comments are aligned with assessment criteria and learning objectives. Weaver also observed that, according to student participants, tutors did not provide enough feedback and did not include enough positive comments. Poulos and Mahony (2008) observed that negative feedback had a demoralizing impact on students’ motivation and learning. Other studies indicated support for balance between positive and negative comments (Can, 2009; Ferguson, 2011; Treglia, 2008).

Participants’ preference for exploratory comments, questions, and complex affirmations was consistent with findings from several studies that indicated a preference for suggestive rather than directive feedback (Can, 2009;

Mulliner & Tucker, 2015; Rae & Cochrane, 2008; Treglia, 2008). Some studies showed that instructors pay attention to micro-level issues rather than content issues and use a directive rather than suggestive approach (Stern & Solomon, 2007; Szymanski, 2014). This type of feedback does not support students' preference for content-oriented feedback delivered via explorations and questions, as reported by participants in the current study. However, the self-selected sample of primarily graduate-level native English speakers may account for this preference, which was consistent with Wolsey's (2008) findings.

Participants' preference for rubric feedback aligned with Nordrum et al.'s (2013) finding that rubric-articulated feedback helped students understand general issues with their writing and techniques for approaching future writing assignments. Nordrum et al. also found that rubric feedback was not as useful as in-text feedback, which served a corrective function as opposed to the evaluative function of rubric feedback. Students in Ferguson's (2011) study reported a preference for customized, criteria-oriented comments explaining how grades were determined, which was consistent with findings from the current study. Riddell (2015) noted that providing students with a clear understanding of how their work will be assessed may increase the likelihood of students meeting assignment expectations. Although Riddell did not specify rubrics as a means of enhancing assessment awareness, this tool is often used for that purpose in postsecondary education. One major theme from the current study (desire for proximal feedback) was not widely reported in the literature. The preference for proximal feedback echoed Wolsey's (2008) finding that most students preferred comments located near relevant essay text.

Participants' preference for supportive, detailed feedback aligned with social constructivist theory, which provided the theoretical framework for the study. Instructor feedback was situated as a scaffolding tool intended to move students through their zone of proximal development from other regulation to self-regulation. Participants' preference for exploratory comments and questions suggested their desire for feedback that promotes independent thinking and encourages greater self-regulation as academic writers. Overall, participants' preference for proximal feedback suggested a desire for moderate scaffolding. Although participants supported the use of track changes to designate corrections, the preference for exploratory, suggestive comments indicated a desire for less intrusive scaffolding.

Constructivist regard for students' preferences should be examined in the context of instructor workload. Postsecondary instructors face a persistent challenge to "balance their desire to provide personalized, meaningful feedback with the limited time they can allot to each paper" (Bilbro et al., 2013,

p. 47). Instructors experience pressure to provide prompt, detailed feedback to high numbers of students in postsecondary courses (Lunt & Curran, 2010). Riddell (2015) argued that increasing the number of feedback loops involving drafts, feedback, and revisions may enhance students' metacognitive awareness and promote development of academic writing skills; however, Riddell cautioned against burdening instructors with an unmanageable workload. Postsecondary instructors should accommodate student preferences whenever possible and find ways to balance their workload when providing scaffolding feedback to promote writing skill development.

Limitations and Recommendations

High self-efficacy may have been a factor in motivating students to volunteer for the study, as suggested by the percentage of participants who strongly agreed (64.1%) or slightly agreed (25.0%) that their writing skills were very good. Wingate (2010) found that students with low self-efficacy as academic writers were less likely to value instructor feedback. Other researchers observed that active students were more inclined to study and apply instructor feedback than passive students (Duncan, 2007; Rae & Cochrane, 2008; Wingate, 2010; Zacharias, 2007). Most participants in the current study reported that they always read instructor feedback, which may limit generalizability of findings. Future studies should include more data from students with low self-efficacy, although gathering these data may be challenging.

None of the survey participants in the current study reported a preference for audio and video feedback when responding to the open-ended questions, and none of the interview participants reported having received these types of feedback in their online courses. One interview participant reported that these types of feedback would probably not be helpful, but another indicated that audio feedback would be better than "great job." The other interview participants did not report a preference or lack of preference for audio or video feedback. More research should be done exploring postsecondary online students' preference for audio and video feedback, as these types gain broader acceptance and use in postsecondary education.

The study was further limited by participant self-selection in that most participants were graduate-level native English speakers who had considerable online learning experience. Future studies could include multiple data collection sites (both public and private postsecondary institutions), more data from undergraduate students, and more data from inexperienced online students. A larger sample would allow researchers to test for variation in preferences based on demographic variables

including age, grade level, online experience, and English-language status. Findings from these studies may help instructors further customize their feedback and follow a constructivist approach when promoting writing skill development among postsecondary online students.

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Appendix A

Survey Questions

1. I prefer to have online instructors correct my errors using **track changes**. (Choose one)
 - a. Strongly agree
 - b. Slightly agree
 - c. Neutral
 - d. Slightly disagree
 - e. Strongly disagree
2. I prefer to have online instructors include comments to explain their corrections. (Choose one)
 - a. Strongly agree
 - b. Slightly agree
 - c. Neutral
 - d. Slightly disagree
 - e. Strongly disagree
3. I prefer to have online instructors' comments appear: (Choose one)
 - a. Within my essay text
 - b. In **balloons** in the margin of my paper
 - c. Neither
4. I prefer to have online instructors use **grammar codes** when identifying errors in my assignments. (Choose one)
 - a. Strongly agree
 - b. Slightly agree
 - c. Neutral
 - d. Slightly disagree
 - e. Strongly disagree
5. I prefer to have online instructors include the following when grading my assignments. (Choose one)
 - a. Corrections only
 - b. Comments only
 - c. Corrections and comments
 - d. Neither corrections nor comments
 - e. Highlighted errors but no corrections or comments
 - f. Other (please describe _____)
6. I prefer to have an online instructor: (Choose one)
 - a. Insert comments throughout my paper
 - b. Type a long comment at the end
 - c. Neither
 - d. Both

7. I always review my online assignments for electronic feedback from my online instructor. (Choose one)

- a. Strongly agree
- b. Slightly agree
- c. Neutral
- d. Slightly disagree
- e. Strongly disagree

8. I have found that the **electronic feedback** provided by online instructors has been helpful in developing my writing skills. (Choose one)

- a. Strongly agree
- b. Slightly agree
- c. Neutral
- d. Slightly disagree
- e. Strongly disagree

9. Considering the types of instructor comments listed below, which one(s) do you prefer? (Choose as many as apply)

- a. Simple affirmations (e.g. Good point! Nice job!)
- b. Complex affirmations (e.g. You made a great point here because....)
- c. Explorations (e.g. You might also consider....)
- d. Personal reflections (e.g. Your point reminded me of an experience I had....)
- e. Clarifications (e.g. Studies actually show that.... I think the author was trying to say....)
- f. Observations (e.g. I wasn't aware of this.... I came to the same conclusion....)
- g. Questions (e.g. Do you mean...? What about...?)
- h. Corrections to content (e.g. This point is confusing because.... Please develop your ideas here by....)
- i. Corrections to mechanics such as spelling, grammar, punctuation, capitalization, etc.

10. I prefer online instructors to include completed **grading rubrics** with their electronic feedback. (Choose one)

- a. Yes
- b. No

11. In my online courses, the instructor's electronic feedback is consistent with the grading rubric. (Choose one)

- a. Strongly agree
- b. Slightly agree
- c. Neutral
- d. Slightly disagree
- e. Strongly disagree

12. I consider my English writing skills to be very good. (Choose one)

- a. Strongly agree
- b. Slightly agree
- c. Neutral
- d. Slightly disagree
- e. Strongly disagree

13. In your own words, please explain how you prefer to receive electronic feedback from your online instructors in your writing assignments.

14. In your own words, please explain why you prefer certain types of electronic feedback from instructors but not others.

15. How much experience have you had receiving electronic feedback in online courses? (Choose one)

- a. 1 course
- b. 2-4 courses
- c. More than 4 courses

16. I am the following: (Choose one)

- a. Undergraduate student
- b. Graduate student

17. English is my first language. (Choose one)

- a. Yes
- b. No

18. My age is: (Choose one)

- a. 18-20
- b. 21-24
- c. 25-29
- d. 30-34
- e. 35-39
- f. 40-44
- g. 45-49
- h. 50-54
- i. 55-59
- j. 60-64
- k. 65+

19. My area of study is: (Choose one)

- a. Business
- b. Information Technology
- c. Health Sciences
- d. Social Sciences
- e. Humanities
- f. Other (please indicate _____)

Appendix B

Interview Questions

1. One of the survey questions asked you how you feel about instructors correcting your writing errors by editing them with track changes. How do you like to have your errors addressed electronically? Why?
2. Please describe where you like instructor comments to appear in your papers. What are the reasons you like that approach?
3. One of the survey questions asked about your preference for grading rubrics, which describe how well you met assignment expectations in categories such as content, organization, grammar, and style. How do you feel about the use of grading rubrics?
4. In your survey, you indicated that you liked certain types of comments but not others (e.g. simple affirmations, questions, corrections). Please explain why you like some types of comments but not others.
5. Please describe a positive experience you had with an instructor's electronic feedback in an online course. Why did you find the feedback helpful?
6. Please describe a negative experience you had with an instructor's electronic feedback in an online course. Why did the feedback seem unhelpful?
7. The survey focused primarily on text-based feedback such as track changes and comments. What other types of electronic feedback do you prefer (for example, audio comments, video files, or something else)? Why do you like this type of feedback?
8. When you think about your development as an academic writer, how has your online instructor's electronic feedback helped you improve your skills? What types of feedback have not been helpful? Why?

“I don’t have time to do any of the things I am responsible for” – University Teachers’ Sense of Responsibility for Teaching

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University teachers work in a highly complex environment, meeting the multiple and sometimes competing demands of striving for high quality teaching and research. While a growing body of research focuses on the relevance of schoolteachers’ sense of responsibility and its outcomes for teaching and student learning, teacher responsibility has been neglected in research with university teachers. This research, consisting of two consecutive qualitative and quantitative studies, sets out to explore university teachers’ sense of responsibility for teaching at different stages of their career and in different academic contexts. Participants were 199 German and 80 Australian university teachers. Results of quantitative data analysis show that all university teachers most strongly feel responsible for their teaching and relationships with students. The focus of university teachers’ sense of responsibility on teaching was also shown in the qualitative data. Differences between the samples of the two studies, however, appeared with regard to further objects of responsibility. Cluster analyses, including the frequencies of statements, revealed three types of university teachers in each study: teaching- and student-oriented university teachers in both studies, achievement-oriented teachers in the German/Swiss, and administrative-oriented university teachers in the Australian sample. Implications for university teachers’ work contexts and training are discussed.

University teachers work in a highly complex environment, meeting the multiple and sometimes competing demands of striving for high quality teaching and research. A number of studies have shown that most academic staff try balancing a number of different tasks related to teaching, research, and administrative matters (Teichler, Arimoto, & Cummings, 2013). This heterogeneity of work was also shown in a study on university teachers’ motivation in which German university teachers named a multitude of goals for their career at the university. These goals related to pursuing research excellence, career progression, providing high quality teaching, gaining prestige or personal growth, or attaining qualifications (Wosnitza, Helker & Lohbeck, 2014). While a growing body of research focuses on the relevance of schoolteachers’ sense of responsibility and its outcomes for teaching and student learning, teacher responsibility has been neglected in research with university teachers. As a consequence of research showing that a person’s sense of responsibility is related to their motivation and also, indirectly, work satisfaction (e.g., Humphrey, Nahrgang, & Morgenson, 2007), this research, consisting of two consecutive qualitative and quantitative studies, sets out to explore university teachers’ sense of responsibility for teaching at different stages of their career and in different academic contexts.

University Teaching

The two central work components in most university teachers’ work are teaching and research. How these two should be balanced, however, is an issue of ongoing tension, especially in contexts where research is more highly rewarded than teaching.

Rowland, for example, found several academics argued there were “dangers in spending too much time on teaching” (Rowland, 1996, p. 10) as this reduced the amount of time available for research. A number of studies have shown that university teachers perceive teaching and research as competing aspects of their work (Bexley, James, & Arkoudis, 2011; Cretchley, Edwards, O’Shea, Sheard, Hurst and Brookes, 2013). University teaching has been perceived as neither being connected to research (Hattie & Marsh, 1996) nor being promoted as strongly or rewarded as highly (Neumann, 1996). Thus, teaching may be perceived as less important for a successful academic career (Bloch, Lathan, & Würmann, 2013), and teaching quality has not been viewed as critical in staffing decisions (Höhle & Teichler, 2013). Similarly, teaching was not one of the central career goals mentioned by early career university teachers (Wosnitza et al., 2014).

Even so, teaching has been shown to constitute one major component of university teachers’ high or low job satisfaction in some countries (Shin & Jung, 2014), and researchers have found aspects of teaching, such as stimulating student interest, teaching new values, and encouraging junior researchers, as main motivators in their work (Doff, 2006). University teachers identifying themselves as teachers, have been found to experience more positive emotions, the most prominent being joy and enthusiasm towards teaching (Postareff & Lindblom-Ylänne, 2011). Hagenauer and Volet (2014) replicated these findings and concluded that “teachers enjoyed teaching best in classes where teacher–students’ relationships were perceived as productive professionally (e.g., students engage in classroom learning, students ask questions, students do not

interrupt) and personally (e.g., building bonds or rapport with students)" (p. 255).

The degree to which university teachers experience pleasure in teaching may differ with career experiences and environmental supports. For example, Hagenauer and Volet (2014) specifically found university teachers at the beginning of their career to experience specific emotions (such as worry/concern and anxiety) in relation to their uncertainty in the new environment. That university teachers perceive teaching as challenging in the beginning may also be related to the fact that university teachers may not actively choose teaching as a career but rather find it a part of their job requirements. Furthermore, it is more often the case that training in teaching pedagogy for adults is not a formal requirement for university teachers (Ates & Brechelmacher, 2013; Bouwma-Gearhart, 2012; Krücken & Wild, 2012).

The University Teachers' Role

The OECD states that the role of higher education teachers is changing due to new aims in university teaching: "In addition to being, first and foremost, a subject expert acquainted with ways to transmit knowledge, higher education teachers are now required to have effective pedagogical skills for delivering student learning outcomes" (OECD, 2012). Prior research on how university teachers should be prepared for teaching has provided multiple insights. In a synthesis of the impact of training for new university teachers, Stes, Min-Leliveld, Gijbels and Van Petegem (2010) identified different approaches to instructional development, focusing for example either on teachers' attitudes, conceptions, knowledge, skills and behavior; or students' perceptions, study approaches, and learning outcomes; or on academic institutions. So while not only teaching and research should best complement each other (cf. Geschwind & Broström, 2014; Visser-Wijnveen, Van Driel, Van der Rijst, Verloop, & Visser, 2010), university teachers' underlying conceptions of how staff and student roles should interact in assisting student learning (Akerlind & Jenkins, 1998) strongly influence university teaching and are therefore addressed in instructional development training. Fox (1983) assumed that in the process of learning to teach, teachers first see teaching as a transfer process, then one of shaping the students, then as a process of travelling and exploring the subject with the students and finally as growing in which teachers pay more attention on the intellectual and emotional development of the learner. In sum, it can be said that how and what university teachers teach is influenced by their idealistic views about what university teaching should do (see Kember, 1997, for a review) and how research and teaching are related (e.g., Prosser, Martin, Trigwell, Ramsden, & Middleton, 2008), which is why any

training should aim at fostering the coherence between ideals and action (Johannes & Seidel, 2012). This, of course, is true for all kinds of teachers, not only those at university. For university teachers, this question becomes specifically relevant given the aforementioned multitude of tasks and responsibilities they try to balance as part of their work.

Responsibility for University Teaching

Within this complex working situation, university teachers' sense of responsibility, i.e., their "internal sense to produce or prevent designated outcomes or that these outcomes could have been produced or prevented" (Lauermann & Karabenick, 2011, p. 135), with regard to their teaching becomes highly relevant. Research has repeatedly shown that just because a person is held responsible by some external instances such as courts, their employer, or other people to produce specific outcomes, they do not necessarily feel personally responsible to do so. Thus, although the value of teaching may be emphasized for more and more university stakeholders, university teachers may not necessarily feel responsible for offering appealing courses and thorough counselling to their students, but just want "get it over with" (Wosnitza et al., 2014). When individuals experience personal responsibility, they have been shown to be more committed to their actions, to feel self-efficacious, motivated, and to be open to new experiences (Bierhoff et al., 2005; Locke & Latham, 2006). With respect to work, Hackman and Oldham (1975) already found that positive personal and work outcomes (i.e., high internal motivation, high work satisfaction, high quality performance, and low absenteeism and turnover) are obtained when three critical psychological states are present: experienced meaningfulness of the work, experienced responsibility for the outcomes of the work, and knowledge of the results of the work activities. Core job dimensions, such as skill variety, task identity, task significance, autonomy, and feedback, would influence whether these three states are obtained. The responsibility that workers of 62 different jobs experienced was found to be moderately predicted by all five job dimensions (Hackman & Oldham, 1976). These findings were further supported by a meta-analysis showing that experiencing a sense of responsibility mediates the positive effects of job autonomy on job satisfaction and internal work motivation (Humphrey et al., 2007).

Regarding the subject of university teachers' responsibility, i.e., what university teachers feel responsible for, overall aspects may not differ much from those identified in research with schoolteachers. For example, research with schoolteachers has mostly focused on how teachers perceive their responsibility for their students' educational outcomes (Bracci, 2009;

Gusky, 1981, 1982; Halvorsen, Lee, & Andrade, 2009; Matteucci & Gosling, 2004; Potvin & Papillon, 1992). Findings of these studies showed that teachers generally tend to assume more responsibility for their students' success than failure, with more responsible teachers spending more time on preparation and advanced training units and having a stronger sense of being supported and encouraged by their school. Only few studies have focused on what teachers are generally responsible for (e.g., Bourke, 1990), such as preparation of learning materials, and most existing research has paid attention to teachers' sense of personal responsibility. Therefore, in a qualitative study, Lauermaun (2014) collected a number of objects for which teachers feel responsible that may ultimately affect student learning, such as students' learning progress, safety and well-being, and classroom atmosphere.

Lauermaun and Karabenick (2013) statistically identified four domains of school teachers' responsibility, namely teachers' responsibility for teaching, their relationships with their students, their students' motivation, and students' achievement. The responsibility for teaching in this context refers to teachers doing their best to make lessons highly effective and engaging. Teachers' responsibility for having positive relationships with students means that students can trust their teachers, rely on them when they need help, and feel cared about. The final two domains of teacher responsibility were that for student motivation (students' interest and value of the subject) and student achievement (learning, performance, and academic progress) (Lauermaun & Karabenick, 2013). Although Lauermaun and Karabenick (2013) showed teacher efficacy to be empirically and conceptually distinct from teacher responsibility, they argue that efficacy may enhance responsibility, as a person's sense of having the ability to have an impact on a given situation and its outcomes may lead to setting respective goals and feeling responsible for pursuing them (e.g., Locke & Latham, 2006).

This Research

In this research, we started with the assumption that the four domains of schoolteacher responsibility identified by Lauermaun would also become apparent in university teachers' responsibility. While universities differ from schools with regard to many organizational aspects and teachers' prerequisites for teaching are highly diverse, we, however, assumed these objects of responsibility to have a slightly different direction in meaning. We thus revised the four-domains structure according to suggestions by prior research on university teachers' goals (Daumiller, Figas, & Dresel, 2015; Wosnitza et al., 2015) and identified nine sub-dimensions.

With regards to their teaching, we assumed teachers' responsibilities to possibly be differentiated into those concerning instruction, i.e., preparation and teaching seminars, and this concerning the content taught, i.e., selection and preparation of contents, being up to date. Concerning the university teacher's relations with his/her students, we assumed these to subdivide into the responsibility for having a positive relationship with each individual student and forming this bond with the group of students one is teaching. We, however, acknowledge that there might be borderline situations between university teachers' responsibility for teaching and their relationships with students when, for example, mentoring/supervising students and their work and theses, which is why we included a specific area there.

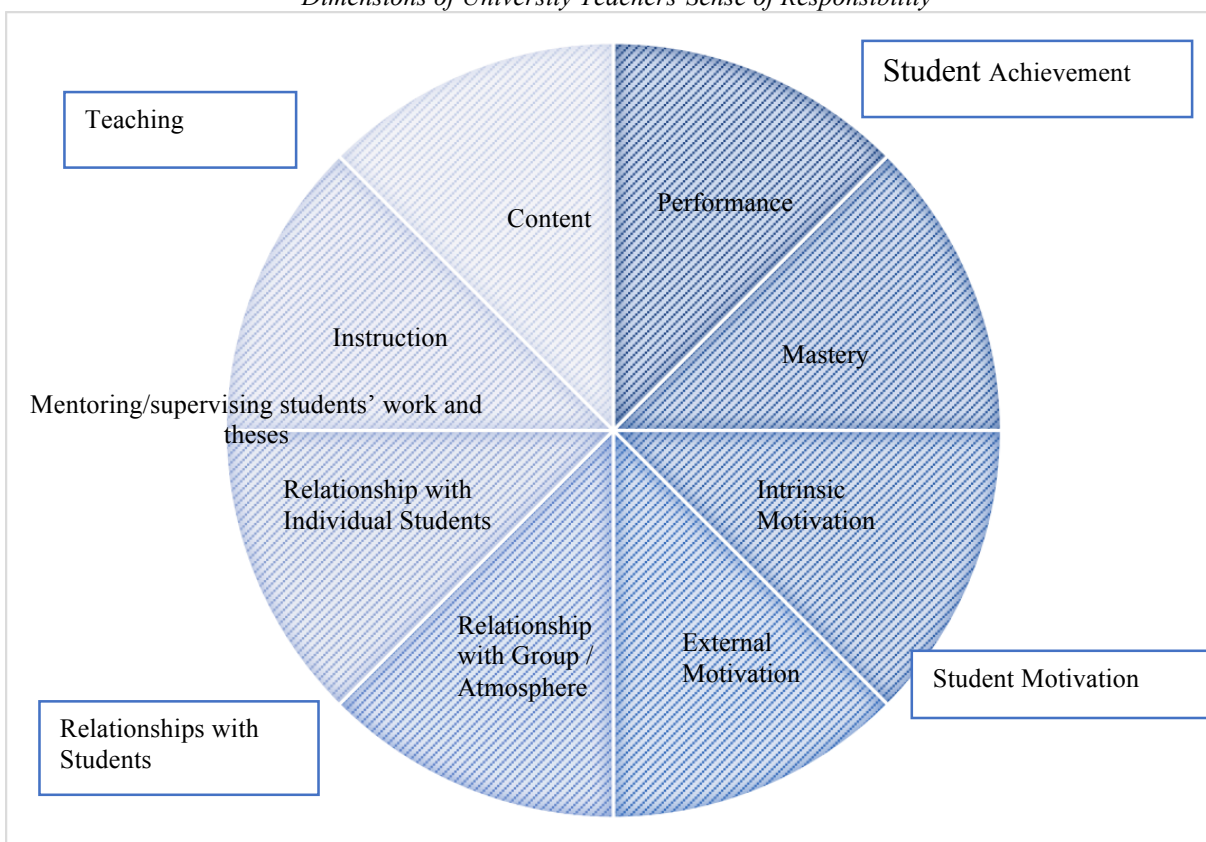
The domain of teachers' responsibility for student motivation can be assumed to be composed on the one hand of teachers being responsible for externally motivating students and on the other hand of teachers evoking students' intrinsic motivation. With regard to student achievement, we hypothesized teachers' responsibility to fall into the categories of responsibility for student performance as opposed to the responsibility for students' mastery of the subject matter (e.g., Ames, 1992).

Furthermore, prior research (e.g., Wosnitza et al., 2014) suggested a domain of university teacher responsibility that has not become apparent in research with school teachers, namely responsibility for matters connected to the macrocontext of teaching, like organization of study courses, preparation and administrative supervision of others (like the professor's courses and lectures), and other teaching-related but general matters. Figure 1 provides an overview of these nine anticipated dimensions of university teachers' sense of responsibility.

Based on these considerations, the primary goal of the present study, therefore, consisted of quantitatively and qualitatively examining university teachers' sense of responsibility for their teaching. University teachers' organizational context and work contents are different from that of school teachers. Also, while most university teachers may not have actively chosen teaching as a career, what they feel responsible for with regard to their teaching is closely related to their work motivation in that area.

This paper presents two studies from two different cultural and university backgrounds to initiate exploring university teachers' sense of responsibility. These two university backgrounds do most significantly differ with respect to how much university teachers are able to plan their careers. In Germany and Switzerland, university graduates starting an academic career enter a full or half time position as junior researchers in an externally funded research project or a temporary position working as a lecturer. Of this group, only 19% have tenure. In Australia, most academics begin their

Figure 1
Dimensions of University Teachers' Sense of Responsibility



careers in a predominantly teaching role unless successfully obtaining significant research funding. At this stage about 51% of Australian academics have tenure (Jacob & Teichler, 2011). Just like in other countries, within both contexts studied in this research project, there are different professional pathways—tenure and non-tenure—that include university teaching to different extents. This fact was the subject of constant consideration during the research project and also guides and partially limits the extent to which data from both studies may be compared. Furthermore, these two settings also vary with regard to the students' relation to their university and consequently their university teachers as representatives. While, for example, students in Australia pay study fees and therefore have a client-like role at university, higher education in Germany is free. University teachers might feel responsible for different things as a consequence of these different settings. Thus, despite both studies implying differing samples, this research project aimed at answering the following overall questions:

- 1) What do university teachers feel responsible for?
- 2) To what extent do university teachers feel they can fulfill these responsibilities, and what role does (work) time (distribution) play?
- 3) Are there different types of university teachers in the light of their assumed responsibility?

Methodology

Measures

Participants completed online questionnaires that included the following measures:

Teacher responsibility. Measures for Teacher Responsibility included (1) Lauermann and Karabenick's (2013) Teacher Responsibility Scales (0= "not at all responsible" to 100= "fully responsible"), measuring teachers' sense of responsibility for teaching ($\alpha=.81$), student motivation ($\alpha=.78$), student achievement ($\alpha=.84$), and teachers' relationships with students ($\alpha=.71$).

In addition to these quantitative measures, university teachers were asked to state in open-ended format what they felt responsible for regarding their teaching and why.

Participants were also asked to (3) rate whether they were able to fulfill this responsibility and (4; if applicable) to explain why they felt they could not always fulfill their responsibilities. Objects of university teachers' responsibility were coded along the lines of the above suggested coding system (Fig. 1; Teaching – Instruction/Content; Relationships with students – Individual/Group; Student Motivation – Intrinsic/Extrinsic; Student Achievement – Mastery Learning/Performance; Administration). A second coder coded 20% of the data (inter-rater agreement, Cohen's $\kappa = .82$).

Teacher efficacy. This instrument consists of one scale with 23 items. The items were adaptations of the teaching efficacy scales by Dellinger, Bobbett, Olivier, and Ellett (2008) extended by self-developed items. The four-point Likert-scale ranged from 1=weak conviction to 4=strong conviction (e.g., "I'm convinced of my skills to motivate my students to do their best"). The internal consistency reliability of the scale assessed by Cronbach's alpha was very good: $\alpha = .94$.

Work time distribution. Participants were asked to state in percent how their work time was usually distributed among the aspects of research, their own research/qualification, teaching and administrative duties. Furthermore, participants were asked to state what distribution they would wish for.

Procedure

Study 1. Participants were 199 German university teachers in the first five years of their careers (51.5% female; age range from 24 to 40 years) and 66 Swiss university teachers (52.3% female; 24 to 48 years old). Participants were from different German and Swiss universities, and involved in teaching of 8 different subject areas, with the most dominant being Mathematics and Science (Germany: 29.5%; Switzerland 45.5%) and Humanities (Germany 26.5%; Switzerland 27.3%). German university teachers had had been working on average for $M = 4.66$ ($SD = 2.40$) and teaching for $M = 4.36$ ($SD = 2.42$) semesters, and Swiss ECUTs had been working for $M = 5.00$ ($SD = 2.29$) and teaching for $M = 4.66$ ($SD = 2.95$) semesters.

Regarding their contractually assigned teaching load, 68.2% of Swiss university teachers had two teaching contact hours per week. In the German subset, 38.5% of participants had a teaching load of two, and 20.5% had a load of four teaching contact hours per week.

Study 2. Participants in Study 2 were 80 Australian university teachers (73.4% female; age range from 24 to 80 years). Like the university teachers in Study 1, participants were from multiple universities and subject areas (most prominent were languages and cultural studies (30.5% of participants)). On average, participants had been working at the university for $M = 4.89$ ($SD = 5.73$) years and were teaching an average of 12 ($SD = 8$) hours per week.

Due to both studies being conducted in different cultures and university systems, analyses of the results did not include in-depth comparisons across the two samples. In each country, there are multiple university career pathways that are difficult to compare (cf. Teichler et al., 2013). These pathways may have tenure or not and may also include more or fewer teaching duties. In these studies, which were a first attempt at learning more about university teacher responsibility, these specificities of the contextual factors were not explored in enough detail that would allow for comparisons. Accordingly, the results will also be presented separately.

Results

RQ1: What do university teachers state to feel responsible for?

Study 1. Regarding German and Swiss university teachers' rating of their responsibility for teaching, student motivation, achievement and relationships with students, results showed that university teachers felt more responsible for their relationships with students and their teaching than for student motivation and achievement. Participants most strongly expressed feeling responsible for their teaching ($M = 73.02$ $SD = 20.38$), closely followed by their sense of responsibility for their relationships with their students ($M = 71.26$ $SD = 21.11$). Participants expressed a considerably lower sense of responsibility for their students' motivation ($M = 38.24$ $SD = 20.98$) and achievement ($M = 45.52$ $SD = 19.98$).

To further explore the aspects, statements regarding what participants felt responsible for with regard to their university teaching, their qualitative statements of objects of their responsibility were analyzed for content. Overall, university teachers mentioned 796 objects of responsibility. The proposed 5 main categories and 8 sub-categories of university teacher responsibility could be identified in the data. These university teachers felt responsible for their teaching, their relationships with students, students' achievement, and motivation, as well as administrative issues regarding teaching. How often objects of responsibility in each of these categories are mentioned, however, varies. Table 1 presents an overview of these categories, numbers of assigned quotes, and sample quotes.

The most dominant responsibility of German and Swiss university teachers identified in the statements of study 1 was teaching itself (59.42% of statements), with the responsibility for instruction being mentioned more often than the one for the contents taught. Relationships with students was the next often (18.72%) mentioned aspect of university teachers' responsibility, with most statements concerning relations with individual

Table 1
Objects of German and Swiss University Teacher Responsibility

Category	Frequencies	Sample Quotes
Total number of statements	796	
Teaching	473 (59.42%)	
Instruction	355 (44.60%)	“preparing teaching material” (#5); “Get to the planned contents in scheduled time.” (#575); “delivering the content” (#303) “teach interesting lessons” (#601) “
Content	118 (14.82%)	“transfer up-to-date state of knowledge” (#85); “my own knowledge of the material” (#356); “only teach correct contents” (#469)
Relationships with Students	149 (18.72%)	
Individual	125 (15.70%)	“being a mentor for students” (#511); “supervising students’ work (solve problems – because I am the assistant)” (#496); “subject-related counseling of students” (#488)
Group	24 (3.02%)	“fairness” (#81); “good group atmosphere” (#367); “reach as many students as possible” (#413)
Student Motivation	39 (4.90%)	
Intrinsic	30 (3.77%)	“raise students’ interest” (#288); “get young academics excited about scientific topics” (#414)
External	9 (1.13%)	“get as many students as possible to work” (#413); “activate students” (#453)
Student Achievement	60 (7.54%)	
Mastery	51 (6.41%)	“students’ knowledge” (#296); “that the students learn something” (#330); “students’ start to think on their own” (#434); “students’ autonomous learning” (#608); “Successful learning of the students” (#151);
Performance	9 (1.13%)	“exam results” (#540); “for students to hand in good theses so that I can give them good grades” (#330); “success at the exams” (#131)
Admin	75 (9.42%)	“administrative effort, e.g. planning exams, organizing room plans, etc.” (#379); “support for lecture – setting up laptop for professor” (#529)

students, helping and counselling the individual, rather than the group.

Administrative responsibilities were mentioned in 9.42% of the statements, and these concerned those responsibilities that do not directly relate to the university teachers’ own teaching but organization of the course of study, colleagues’ lectures, and seminars, etc. As with respect to the Teacher Responsibility Scales above, university teachers’ sense of responsibility for student motivation and achievement was lower. While 7.54% of statements focused on objects of responsibility related to student achievement (mastery: 6.41%, performance: 1.14%), university teachers felt least responsible for their students’ motivation. Overall, 4.90% of statements focused on student motivation, with 3.77% of statements stressing

university teachers’ responsibility for evoking students’ intrinsic motivation while 1.13% of statements focused on externally motivating students.

With respect to the different subject areas, analyses showed that while university teachers in Languages mentioned significantly more responsibilities for relationships with students (23.58%) than teachers in mathematics (15.38%, $X^2=4.60$ $p<0.05$), university teachers in the latter group mentioned significantly more administrative responsibilities (13.25%, $X^2=4.60$ $p<0.001$).

Study 2. Regarding the quantitative measures of Australian university teachers’ sense of responsibility, analyses showed that participants in Study 2 expressed a strong sense of responsibility for teaching ($M=80.83$ $SD=15.91$), followed by relationships with students ($M=76.50$ $SD=18.00$). University teachers’ responsibility

Table 2
Objects of Australian University Teacher Responsibility

Category	Overall Frequencies	Sample Quotes
Total number of statements	266	
Teaching	157 (59.02%)	
Instruction	108 (40.60%)	“Preparation of lectures, tutorials and answering student questions.” (#200); “Quality teaching” (#263)
Content	49 (18.42%)	“not to share speculations as confirmed knowledge” (#144); “content knowledge – to be a good teacher, you need to know your content” (#221), “provide current, accurate information to students” (#231)
Relationships with Students	35 (13.16%)	
Individual	24 (9.02%)	“timely response to student queries” (#214); “students are able to ask me for help with course material” (#15);
Group	11 (4.14%)	“provide a safe, supportive learning environment” (#231); “Students should have a positive classroom experience” (#251); “leadership” (#177)
Student Motivation	20 (7.52%)	
Intrinsic	7 (2.63%)	“enthusiasm of undergraduate students” (#265); “student motivation” (#265); “create interest in the topic” (#134)
External	13 (4.89%)	“keep postgrads going” (#27); “engaging students” (#229);
Student Achievement	23 (8.65%)	
Mastery	22 (8.27%)	“establishing foundation knowledge” (#219); “improve the content knowledge of my students” (#170); “getting them to think and not rely on memory” (#123)
Performance	1 (0.38%)	“student success – if they fail, in some cases I feel I have let them down” (#198);
Admin	31 (11.65%)	“development of innovative programs” (#270), “coordinating units” (#195)

for student motivation and achievement both were rated considerably lower (motivation: $M=60.90$, $SD=18.25$; achievement: $M=49.39$, $SD=20.42$).

In the open-ended questions on their sense of responsibility, university teachers mentioned 266 objects of responsibility. The proposed 5 main categories and 8 sub-categories of university teacher responsibility could be identified in the data. University teachers feel responsible for their teaching, their relationships with students, students' achievement, and motivation, as well as for administrative issues regarding teaching. How often objects of responsibility in each of these categories are mentioned, however, varies. Table 2 presents an overview of these categories, numbers of assigned quotes, and sample quotes.

With 59.02% of the statements being assigned to this category, teaching was the most mentioned

object of responsibility, with more instruction- than content-related objects being mentioned. Regarding their sense of responsibility for relationships with students (13.16% of statements), participants more often mentioned relationships with individual students (e.g., counselling etc.) than with the group (e.g., working atmosphere). University teachers' sense of responsibility for student motivation, despite being generally low (8.65% of statements) focused more on externally motivating students than on intrinsic motivation.

With respect to the different subject areas, analyses showed that university teachers in Languages mentioned significantly more responsibilities for relationships with students (24.39%) than teachers in mathematics (13.79%, $X^2=8.12$ $p<0.01$) while mathematics university teachers mentioned significantly more objects of responsibility for teaching (68.63%, $X^2=8.24$ $p<0.01$).

RQ2: To what extent do university teachers feel they can fulfill these responsibilities?

Study 1. For each of the responsibilities mentioned, participants were asked to state the extent to which they felt they were able to fulfill this responsibility.

Overall German and Swiss university teachers felt well able to fulfill their perceived responsibilities ($M=3.66$, $SD=0.85$). As anticipated, analyses revealed correlations between university teachers' sense they were able to fulfill certain responsibilities. In general, fulfillment of responsibility for teaching correlated with responsibility for administrative matters ($r=.39$, $n=49$, $p<.01$). Furthermore, the sense of being able to fulfill their responsibility for relationships with students correlated with achievement ($r=.70$, $n=14$, $p<.01$) and administrative responsibilities ($r=.40$, $n=31$, $p<.05$).

Regarding teacher efficacy, German and Swiss university teachers in this study generally did appraise themselves rather positively ($M=2.94$, $SD=.46$), and their sense of teaching efficacy correlated with their sense of being able to fulfill teaching responsibilities ($r=.24$, $n=224$, $p<.001$) and relationships with students ($r=.24$, $n=118$, $p<.01$).

Furthermore, significant differences appeared between university teachers in different subject areas, with Mathematics teachers having a significantly lower sense of teaching efficacy ($M=2.87$, $SD=.42$) than teachers in Language and Cultural Studies ($M=3.01$, $SD=.42$, $t(148)=2.06$, $p<.05$) and Jurisprudence, Economy, and Social Sciences ($M=3.03$, $SD=.44$, $t(121)=-2.0$, $p<.05$).

Participants in this study had been asked about their actual and desired work time distribution among

the aspects of research, their own research/qualification, teaching and administrative duties in order to find whether spending too much time on less desirable tasks might be a reason for university teachers to feel they were not able to fulfill their teaching responsibility. Accordingly, in a first step the difference for each university teachers' actual and desired work time assigned to each of the four areas was calculated. Results showed that the majority (77.7%) of university teachers wished to spend more time on their own research and qualification, with 15.5% stating that actual and desired time spend on their own research was the same. With regard to which aspects university teachers expressed the wish to spend less time on than they currently do, 50.6% of participants stated that they wanted to spend less time on teaching, and 70.6% mentioned their administrative responsibilities.

Regarding the question of whether the orientations the participants expressed regarding their work distribution also affected the fulfillment of their responsibilities, analyses revealed a negative correlation between the difference in actual and desired work distribution regarding their own research/qualification and the fulfillment of the responsibility for teaching ($r=-.53$, $n=264$, $p<.001$), as well as administrative duties ($r=-.39$, $n=264$, $p<.001$). Furthermore, whether university teachers felt they were able to fulfill their responsibility for teaching correlated with work load. Teachers felt more able to fulfill their responsibility if their actual administrative workload was lower ($r=-.24$, $n=265$, $p<.001$) and they had more time to spend on their own research ($r=.12$, $n=264$, $p<.05$).

Figure 2
Actual and desired work distribution of German and Swiss university teachers

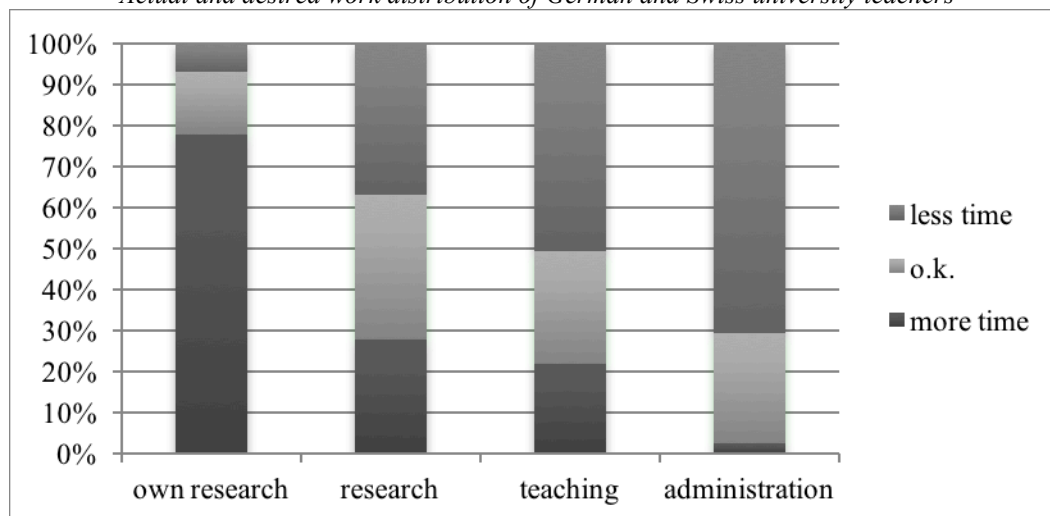
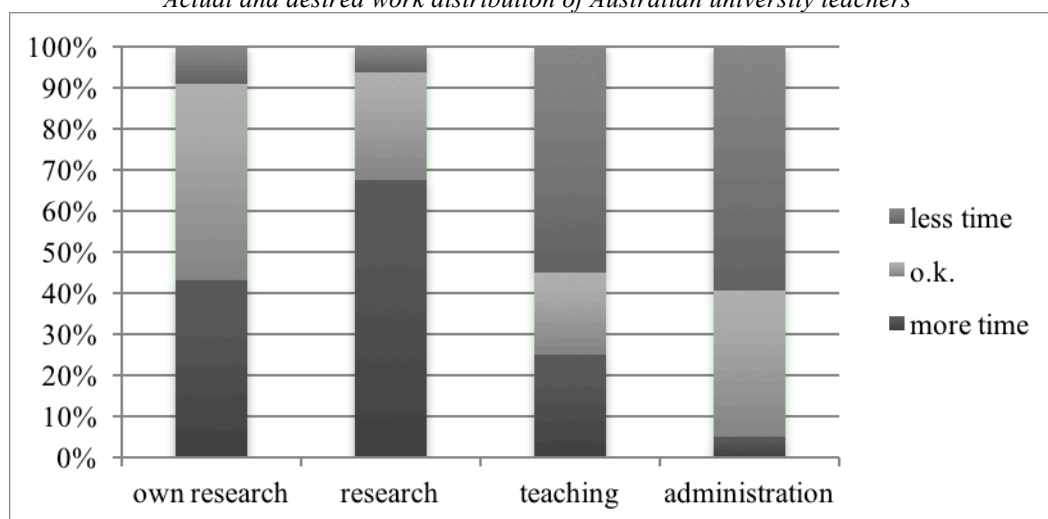


Figure 3
Actual and desired work distribution of Australian university teachers



In the dynamic online questionnaire, university teachers who stated they were not always able to fulfill their responsibilities were asked why this was the case. Qualitative data was content-analyzed and showed a number of aspects that effect university teachers' fulfillment of responsibility. The majority of statements focused on the lack of time for teaching and the fact that other work duties (especially their qualification) kept participants from spending as much time on the preparation of classes and mentoring students as much as they wanted to: "Sometimes other appointments/deadlines and tasks are more important or urgent." (#575). Also, participants often mentioned lack of knowledge as a hindrance in fulfilling their responsibility. This either referred to content knowledge, teaching strategies or knowledge about the organizational aspects of teaching: "Every schoolteacher is better trained than a university teacher, while the contents we teach at [the] university are more difficult" (#470). External restrictions were also mentioned as keeping university teachers from fulfilling their responsibility. These were aspects such as the slow changes in the curriculum, but also having to teach courses for professors who are not open to suggestions of new content or methods (#327). Lack of resources, overall lack of value placed on teaching in the institute, and student aspects such as group size and lack of student motivation and knowledge were further factors that German and Swiss university teachers mentioned as limiting the extent to which they could fulfill their responsibility.

Study 2. Regarding the question of the extent to which Australian university teachers felt able to fulfill their responsibilities, analyses showed they generally felt well able to fulfill their responsibilities ($M=3.90$ $SD=0.69$). Regarding different aspects of their work, analyses showed that fulfillment of the responsibility for

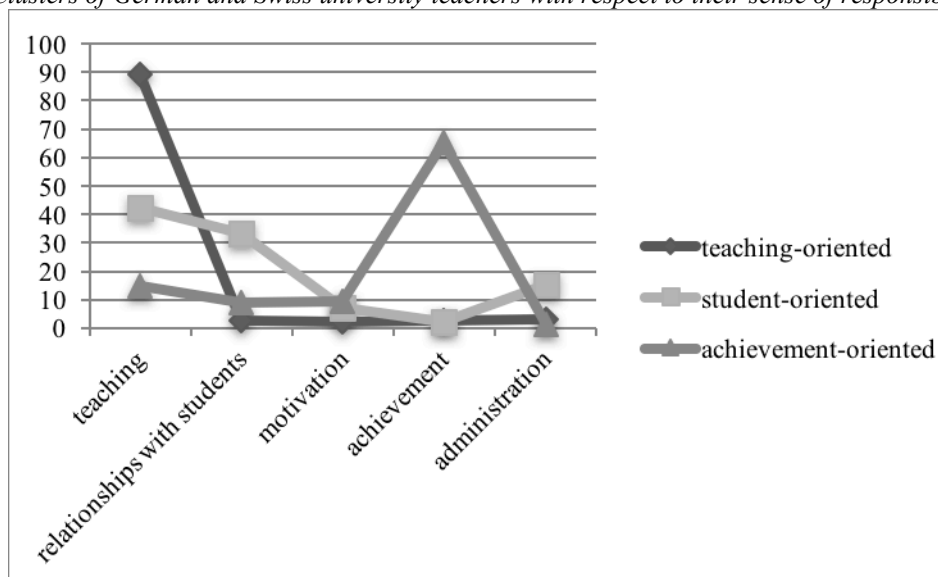
teaching correlates with that for relationships with students ($r=.54$, $n=22$, $p<.01$), and fulfillment of responsibility for students' motivation and achievement are correlated ($r=.86$, $n=6$, $p<.05$). The extent to which university teachers felt able to fulfill their responsibility for teaching correlated with their sense of responsibility on the teacher responsibility scales ($r=.25$, $n=65$, $p<.05$).

Regarding teacher efficacy, university teachers in this study also appraised themselves rather positively ($M=3.32$, $SD=.47$), and their sense of teaching efficacy correlated with their sense of being able to fulfill their responsibilities for relationships with students ($r=.29$, $n=78$, $p<.05$) and student motivation ($r=.22$, $n=78$, $p<.05$). Furthermore, teachers' sense of teaching efficacy correlated with their sense of being able to fulfill their administrative duties ($r=.40$, $n=26$, $p<.05$).

Looking at the work distribution of university teachers in study 2, the difference for each university teachers' actual and desired work time assigned to each of the four areas was calculated. Figure 4 provides an overview. Results show that, like German and Swiss university teachers, the majority of Australian university teachers (67.5%) wanted to spend more time on research (the number of university teachers wanting to spend more time on own research was, however, lower (43.0%)). Of the participants, 25.0% wanted to spend more time on teaching than they actually did, while 20.0% were happy with the amount of time spent on teaching. Regarding the administrative load, 35.4% of participants stated that they were happy with the time spent on these duties.

Correlation analyses revealed a positive relation between the actual and desired work distribution and university teachers' sense they could fulfill their responsibility for teaching ($r=.43$, $n=66$, $p<.001$) and administration ($r=.48$, $n=28$, $p<.05$).

Figure 4
Clusters of German and Swiss university teachers with respect to their sense of responsibility



Also, Australian university teachers who stated they were not always able to fulfill their responsibilities were asked why this was the case. Reasons given included time pressure, other demands, and administrative aspects: “Time pressures - my manager is very supportive, but marking, assessment, development of curriculum eats away at available time” (#114). Another notes:

I don't have time to do any of the things I am responsible for doing fully. The administrative responsibilities of academic staff have increased dramatically in the few years I've been in my position, to the point where the only way for staff to cope is to put some of those responsibilities aside. Some of the responsibilities require institutional, administrative and infrastructure support that is not available at the level required. (#231).

As well as time and administration, participants also mentioned teaching out of field and uncertainty about their capacity to teach: “I'm not teaching in my field, I'm not formed to be a teacher” (#354). University systems also were noted as restrictive, with participants feeling “[l]imited capacity to drive change across Faculty in current position” (#180) and the need to “fit an approach into a recognised [*sic*] model for assessment, unit outlines, etc.” (#121). Lack of resources and student engagement were further, more rarely mentioned aspects that university teachers mentioned as keeping them from fulfilling their responsibility.

RQ3: Are there different types of university teachers in the light of their assumed responsibility?

Study 1. In order to identify different types of university teachers, cluster analyses were performed based on objects of responsibility German and Swiss university teachers had named in the qualitative data. The proportion of nomination for each responsibility category was entered into the analysis. For example, Participant 1 named 4 responsibilities: Teaching=1, Relationships=2, Motivation=1, Achievement=0, Admin=0. Data entered for Participant 1 was: T=25, R=50, M=25, AC=0, Ad=0. Participant 2 named 3 responsibilities: T=0, R=3, M=0, AC=0, Ad=0. Data entered for Participant 2 was: T=0, R=100, M=0, Ac=0, Ad=0).

A 2-step cluster analysis was performed combining hierarchical clustering using Ward's method and subsequent cluster optimization by the k-means algorithm (cf. Asendorpf, Borkenau, Ostendorf, & Van Aken, 2001). The statistical criteria suggested by Bacher (2001) were used to identify the appropriate number of clusters. T-tests were conducted to examine significant effects of cluster membership on the variables employed in the cluster analysis (e.g., teaching, relationships, motivation, achievement, and administration). Findings revealed three distinct clusters of university teachers, namely teaching-, student-, and achievement-oriented university teachers. Table 3 and Figure 4 present the characteristics of the three identified groups.

Table 3
Clusters of German and Swiss University Teachers With Respect to Their Sense of Responsibility

Responsibility	teaching-oriented university teachers (N=114)			student-oriented university teachers (n=128)			achievement-oriented university teachers (n=23)			F-value	p
	M (SD)	Min	Max	M (SD)	Min	Max	M (SD)	Min	Max		
Teaching	89.12 (14.24)	60.00	100.00	42.38 (18.89)	.00	66.67	14.86 (19.78)	.00	50.00	312.44	<.001
Relationships with Students	2.50 (7.35)	.00	25.00	33.23 (21.62)	.00	100.00	8.84 (15.88)	.00	50.00	108.80	<.001
Motivation	2.38 (7.95)	.00	33.33	6.97 (16.96)	.00	100.00	9.42 (16.53)	.00	50.00	4.52	<.05
Achievement	2.65 (8.33)	.00	33.33	2.10 (7.40)	.00	33.33	65.43 (22.96)	33.33	100.00	414.95	<.001
Administration	3.35 (9.54)	.00	33.33	15.33 (23.64)	.00	100.00	1.45 (6.95)	.00	33.33	16.03	<.001

While teaching-oriented university teachers mostly expressed feeling responsible for their teaching, student-oriented university teachers also feel responsible for their relationships with their students and the administrative aspects that come with that. Participants in cluster 3 were called achievement-oriented university teachers as they mainly mentioned feeling responsible for their students' achievement and considerably lower for aspects such as teaching, relationships with students, or their students' motivation.

No significant differences between the groups could be identified with regard to their sense of being able to fulfill their responsibility, or their desired and actual work distribution, or the discrepancy between them.

Regarding the different subject areas university teachers stated to be teaching in, chi-square analyses revealed significantly more student- than teaching-oriented university teachers in Languages and Cultural Studies ($\chi^2=4.75$, $p<.05$). Overall, the cluster of student-oriented university teachers held significantly more teachers of Languages and Cultural Studies, as well as Mathematics, than university teachers of Jurisprudence, Economy and Social Studies, or Medicine ($p<.05$).

Study 2. Just like Study 1, Australian participants' proportion of nomination for each responsibility category was entered into a 2-step cluster analysis in order to identify different types of university teachers with regard to the objects they feel responsible for as university teachers. Findings revealed three distinct clusters of university teachers, namely teaching-, student-, and administration-oriented university teachers. Table 4 and Figure 5 present the characteristics of the three identified groups.

While teaching-oriented university teachers mostly expressed feeling responsible for their teaching, student-oriented university teachers also felt responsible for their relationships with their students and their motivation and achievement. Participants in cluster 3 were called

administration-oriented university teachers as they strongly (95.24%) focused on administrative responsibilities.

No significant differences between these groups could be identified with regard to Australian university teachers' desired and actual work distribution or the discrepancy between them, but admin-oriented university teachers felt generally more able to fulfill their responsibilities than teaching-oriented university teachers ($p<.05$). Regarding the different subject areas university teachers stated to be teaching in, chi-square analyses revealed significantly more student- than teaching-oriented university teachers in Languages and Cultural Studies ($\chi^2=3.84$, $p<.05$).

Discussion

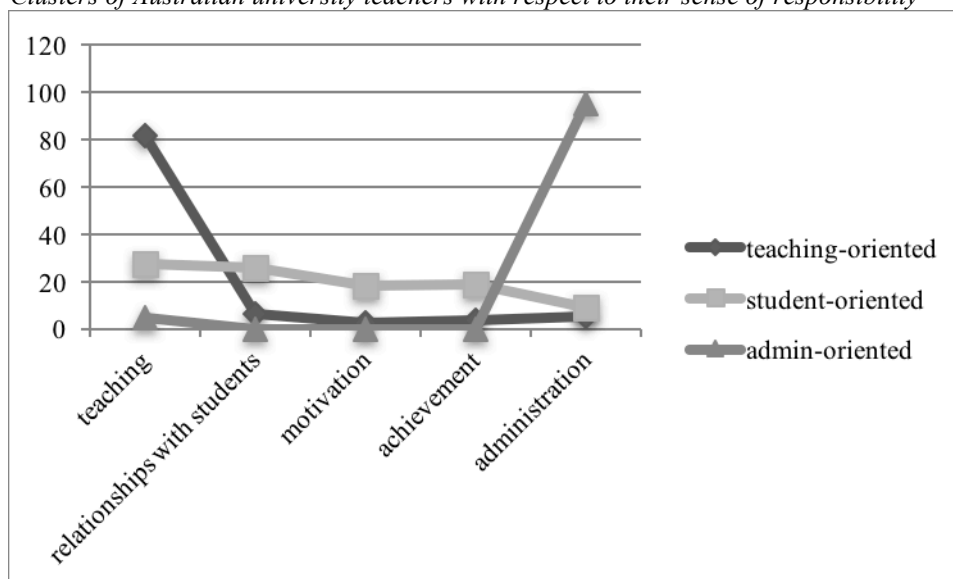
This study aimed to explore university teachers' sense of responsibility, which is important because it is strongly related not only to teachers' own motivation and work satisfaction, but also to the quality of student outcomes. The samples included university teachers at different stages of their careers and from different countries and university cultures.

In both studies, university teachers' sense of responsibility revolved around their teaching, with 59.42% of German and Swiss and 59.02% of Australian university teachers' statements focusing on the responsibility for instruction and subject content. An object of teacher responsibility unique to university teachers is administration. Administrative tasks were not mentioned in prior studies with school teachers but was mentioned considerably often: 9.42% of statements in Study 1 and 11.65% in Study 2. This finding can be assumed to relate to the context university teachers find themselves working in. In contrast to schools, study courses at the university need regular adapting to new

Table 4
Clusters of Australian University Teachers With Respect to Their Sense of Responsibility

Responsibility	teaching-oriented university teachers (N=44)			student-oriented university teachers (n=29)			admin-oriented university teachers (n=7)			F-value	p
	M (SD)	Min	Max	M (SD)	Min	Max	M (SD)	Min	Max		
Teaching	81.48 (16.12)	.60	100.00	27.82 (19.27)	.00	50.00	4.76 (12.60)	.00	33.33	119.50	<.001
Relationships with Students	6.63 (12.05)	.00	33.33	26.15 (28.53)	.00	100.00	0.0 (0.0)	.00	.00	10.58	<.001
Motivation	2.58 (7.50)	.00	33.33	18.22 (27.74)	.00	100.00	0.0 (0.0)	.00	.00	7.67	<.05
Achievement	3.75 (9.81)	.00	33.33	18.91 (25.72)	.00	100.00	0.0 (0.0)	.00	.00	7.86	<.001
Administration	5.57 (10.19)	.00	40.00	8.91 (15.08)	.00	40.00	95.24 (12.60)	66.67	100.00	163.55	<.001

Figure 5
Clusters of Australian university teachers with respect to their sense of responsibility



scientific as well as other developments, and also, much less than in a school context, they need coordination in order for lectures to match laboratory practice or seminars (“administrative effort, e.g. planning exams, organizing room plans, etc.,” #379). Furthermore, a number of statements of German and Swiss university teachers regarding the responsibility for administration mention especially early career university teachers being responsible for preparing their professor’s lectures or caring for everything besides the actual teaching of the lecture (“support for lecture – setting up laptop for professor,” #529). Some teachers described feeling responsible for the organization of lectures and seminars because otherwise there would be “chaos” (#570) or because “nobody else does it” (#383). Regarding the other objects of responsibility, university teachers by and large did not seem to assume much responsibility for their students’ motivation and achievement.

Although the findings show that these university teachers assumed responsibility for their relationships with students, the content of their relationship-focused statements strongly differs from those of school teachers (as shown in Helker and Wosnitza, 2014). For example, only few university teachers mentioned feeling responsible for personally counselling students and helping with problems outside the university. The majority of statements in this area focused on “being there for the students” (#378), on “subject-related counseling of students” (#488), or on “supervising students’ work (solve problems – because I am the assistant)” #496). Data on the fulfillment of the assumed responsibilities revealed that in both studies the feeling of being able to fulfill specific responsibilities correlated with the fulfillment of others and overall teacher efficacy. German and Swiss university teachers very strongly expressed the wish to

spend more time on their own research and qualification and less time on administrative matters. This was somewhat similar with Australian university teachers, although the aspect of desiring time for their own research was not as prominent. These differences might possibly be explained by the differences between participants in the two studies regarding their experience and cultural settings. The need to gain qualifications to continue work at the university is not as dominant in other university work settings and in Germany and Switzerland at the early stages.

The analyses of the data from Study 1 revealed three types of German and Swiss university teachers: teaching-oriented, student-oriented, and achievement-oriented. While the student- and teaching-oriented groups were almost equally large, there were fewer achievement-oriented university teachers, who felt less responsible for their teaching, relationships with students, student motivation, and administrative matters, but focused on their students' achievement in end-of-semester exams.

The group of Australian university teachers in Study 2 also revealed three types of university teachers, namely teaching-oriented, student-oriented and admin-oriented university teachers. The group of teaching-oriented university teachers was the largest, while student-oriented university teachers (focusing on their teaching and relationships with students but also on students' motivation and achievement) was the second largest. In this study, the third group consisted of admin-oriented university teachers who predominantly felt responsible for administrative matters, organizing classes, and other issues.

The differences between the groups of university teachers in the two studies could be hypothesized to result from the different levels of experience of the university teachers involved in both studies. More experience with teaching at the university and the system itself might lead to a conscious or subconscious change in what a university teacher feels responsible for.

With teaching having been found to be perceived as neither rewarding (Neumann, 1996) nor having an influence on staff decisions in the faculty (Höhle & Teichler, 2013), the data in this study suggest further research into the question of university teachers' training. If the main goal that university teachers in these subject areas hold for teaching is "to get it over with", as was identified in prior research (Wosnitza et al., 2014), and if young university teachers receiving hardly any training (e.g., Ates & Brechelmacher, 2013), but are just "thrown in at the deep end," they can be assumed to not learn about further aspects of teaching than to organize the course (or have someone else organize it – see above) and just teach it. Future research using multiple methodological approaches like observations or student reports in combination with the instruments used in this

study would shed light on this phenomenon. Furthermore, future studies will have to more thoroughly explore the differences between beginning and experienced university teachers as this study draws on data of university teachers from different countries, which can be seen as a limitation of this study.

Conclusion

This study expanded findings on the topic of teacher responsibility by the focus on early career university teachers. It showed that regarding their perceived responsibility, domains of teacher responsibility could also be identified in university teachers' data and be extended by the aspect of responsibility for administration issues. Furthermore, the data revealed different types of university teachers, regarding their assumed responsibility, whose distribution was found to differ between different subject areas. This aspect reveals a starting point for future research, as no research has yet focused on whether there are also different types of school teachers regarding their view of their responsibility.

The sample of this study is specific to German and Swiss, as well as Australian, university teachers with their own specific characteristics regarding job arrangement that is reflected in the demographics of the sample. It would be interesting to find out how teachers in other higher education settings and other countries respectively differ from these.

The present findings contribute to a better understanding of the challenging working context of university teachers and its effects on their sense of responsibility for teaching. Such insights may also provide senior university teachers and supervisors with valuable information regarding how to foster young academics' development of their sense of professional responsibility as university teachers among the competing demands of that role.

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Overcoming the Challenges of Using Humor in Non-Native Instructional Discourse

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This article describes a narrative study exploring the challenges that international teaching assistants (ITAs) encounter when using humor in North American university classrooms. Twenty participants were recruited from twelve teaching fields. Each ITA participated in two interviews and a videotaped teaching observation. The participants talked about their use of humor in the classroom and the reasons they were reluctant to engage in humor. These autobiographical narratives were then subjected to thematic analysis (Braun & Clarke, 2013). Findings from this study revealed that the ITAs specified linguistic, cultural, social, and authoritative challenges to using humor, but then explore the ITAs' personal strategies to overcome these obstacles. The article concludes with a discussion of how humor can benefit ITA training programs and provide a way to explore the connections between language, culture, and pedagogy.

Incorporating international instructors into the faculties of U.S. colleges and universities adds to the academic quality of the professorate, as well as promotes internationalism on university campuses. The demographics of U.S. higher education continue to shift toward increasing numbers of internationals and non-native speakers of English in the teaching force. According to the Institute of International Education (IIE), the number of international scholars in the United States has increased from 115,098 in the 2009-10 academic year to 177,453 in the 2015/16 academic year (IIE, 2016). Seventy-six percent are in the science, technology, engineering, and math (STEM) fields, with China, India, South Korea, and Germany providing the greatest numbers (IIE, 2016). Of the near 180,000 noncitizen scholars, 34.6 percent receive funding from U.S. colleges and universities in the form of grants, scholarships, loans, and work-study (IIE, 2016). Presumably, those graduate students eligible for work study and with adequate proficiency scores on either the TOEFL or TSE exams can apply for ITA positions in their respective colleges or universities. Given the prevalence of international teaching assistants, it is imperative that we understand the challenges ITAs face while researching solutions to provide the needed supports as they adjust to the teaching norms at U.S. universities.

Research into the instructional practices of ITAs has revealed numerous challenges that stem from a mismatch between the ITAs' first language (L1) and home culture and that of the target community (i.e., North American undergraduate classrooms). Linguistic, sociocultural, and pedagogical competencies or inadequacies comprise the bulk of the research into ITAs and their teaching contexts (See Gorsuch, 2016 for a full review). Whether exploring the connections between teaching practices and student/teacher expectations (e.g., Chiang, 2009; McCalman, 2007; Moeller & Faltin Osborn, 2014) or language proficiency and cultural differences (e.g., Dawson, Dimitrov, Meadows & Olsen, 2014; Gorsuch, 2003a,

2003b, 2012; Kang & Rubin, 2009), researchers have attempted to define the difficulties that ITAs face when taking on the responsibility of undergraduate instruction.

Currently no standard exists for the assessment and preparation of ITAs. While some of the ITA research indicates that ITA training should include language, pedagogy, and culture (Hoekje & Williams, 1992), the degree to how training is implemented is determined by the institution. Some program models focus on the socialization of ITAs to help ITAs adjust to American higher education (Jia & Bergerson, 2008), while others focus on teaching pedagogical skill sets that the ITA would be expected to have in the university classroom (Boman, 2013). Many universities do not have the resources for an extensive ITA training program, so training could be limited to a workshop or a one-semester class that is taken in addition to the regular content area coursework (Boman, 2013; Hoekje & Williams, 1992). In some cases, ITAs receive teaching assignments based on an adequate combination of TOEFL and TSE scores (Xi, 2007). Concerning the use of language proficiency exams as a final assessment measure, Hoekje and Williams (1992) admonished,

Oral proficiency tests have thus been challenged as valid evaluation measures, both in terms of the construct they have proposed to measure (language proficiency) and in terms of applying the test score to other contexts, such as the classroom (p. 262).

Those institutions that have the monetary and personnel resources place ITAs in a course specifically designed for international teacher preparation (Gorsuch, 2013). Often this is a three-hour-a-week class for a single semester, in which the ITA practices the academic language that is discipline specific while learning cultural expectations for teaching styles. Many ITAs have some additional departmental support to offer the ITA supervision and feedback on department

procedures and policies for teaching. In this case, specific language instruction is not part of the curriculum; consequently, many ITAs struggle in their teaching assignments.

ITAs that have either recently entered the U.S. or been studying here for several years still experience high levels of anxiety when having to converse spontaneously with students (Brown, 2008; Li, Mazer, & Ju, 2011). Low communicative skills and the demands of adjusting to a new educational culture pose significant hurdles in testing ITA linguistic and communicative competence (Chiang, 2011; Dawson, Dimitrov, Meadows & Olson, 2015; Gorsuch, 2012). Studies that track student affective learning to teacher communication behavior positively correlate better teachers as having a teaching style perceived to be dramatic, open, relaxed and friendly (Li et al., 2011; Zhang, 2014).

Language, instructional context, and culture combine to make the use of humor a complicated concept for any second language (L2) speaker to master (Bell, 2006, 2007b). As a result, many L2 speakers avoid humor altogether. Harder (1980) refers to this phenomenon as the “reduced personality” of the L2 learner because the student is unable to enact the same level of humor that he or she would in a native language. This lack of confidence is expressly manifest in the instructional setting where ITAs are forced to communicate cohesively and coherently, producing few lexical, syntactic, or prosodic miscues (Hoekje & Williams, 1992). To further the research on ITAs, this paper begins with an exploration of the research on ITAs and humor, culminating with a narrative study describing the self-reported challenges ITAs face while attempting to use humor in their university classrooms. Such data provides researchers with insight on how to help language learners identify and develop skills needed to incorporate humor into their teaching repertoire, thereby increasing the linguistic options in the classroom.

Background Research

International Teaching Assistants

Following Gorsuch (2012), ITA researchers have focused on the relationships across the areas of language proficiency, teaching practices and expectations, and cultural differences. Within the area of language proficiency, Gorsuch (2016) documents highly detailed descriptive measures of sentence level stress (Hahn, 2004; Levis, Levis & Slater, 2012), tone choice and intonation (Pickering, 2001; Gorsuch, 2013), and interventions with pronunciation (Hahn, 2004; Levis et al., 2012). Other areas of research by Gorsuch (2011, 2013) have focused efforts on pedagogical interventions addressing remediating pausing patterns in speech. A long-standing issue for

researchers is the native speaker norms for speech behaviors and pronunciation practices, along with reliance on subjective ratings by students to judge the effectiveness of the various interventions (see Kang, Rubin, & Lindeman, 2015 for a review). Acknowledging the narrow focus of such studies, Gorsuch (2016) calls for future research that considers the influence of an ITA’s professional history on L2 growth. She also advocates that ITA research needs to examine the length of time needed to develop more native-like prosodic patterns of speech.

From a cultural perspective, researchers have explored how teaching practices and expectations emerge from both the professional experiences and cultural backgrounds that ITAs bring to the classroom (e.g., Ates & Eslami, 2012; Brown, 2008; Gorsuch, 2003b, 2012; McCalman, 2007). Many of the ITAs originate in countries where there is a clear division of power between the teacher and the student, and classrooms are exclusively teacher-centered (Dawson, et al., 2014). As a result, ITAs struggle with transitioning into U.S. classrooms where the predominant student-centered teaching style allows for disagreement with the instructor (Dimitrov et al, 2014), interruption of the teacher (Ashavskaya, 2015; Chiang, 2011), or challenge of a grade (Gorsuch, 2003b).

In two separate studies, Gorsuch (2003a, 2012) developed questionnaires seeking the intersections between the educational cultures of ITAs and U.S. universities. The purpose of the investigations was to determine how past educational experiences influenced beliefs about “good teaching,” and the impact those beliefs had on how ITAs adjust to their new educational environment. Findings indicate the more developed their procedural knowledge, the more definitive their agreement or disagreement about what constitutes good teaching. Cultural and educational backgrounds, therefore, play a critical role in how ITAs approach teaching and influence their interactions with American undergraduates. Gorsuch (2012) concluded that adjustments in cultural and procedural knowledge must be understood in terms of L2 usage by stating, “ITAs need second language communication ability to learn new communicative genres relevant to teaching in U.S. higher education, and expand and redefine the ones they already have” (p. 15).

McCalman (2007) addressed the differences in language and culture between ITAs and their new teaching contexts through the concept of intercultural competent instructors or ICC. Using a traveling metaphor, McCalman saw the ITA as a sojourner: one who moves through multiple languages and cultures acquiring the skills and knowledge to communicate effectively. Conceptualizing an ITA as an ICC has gained strong support (e.g., Dimitrov & Haque, 2016; Moeller & Faltin Osborn, 2014). The ITA as ICC

makes explicit the connections between language and culture. McCalman wrote, "In the intercultural classroom, communication competence is the process by which the instructor continually strives to achieve the ability to work effectively and appropriately within the cultural context of his or her students" (p. 70).

Understanding the educational culture of U.S. undergraduate instruction necessitates knowing what makes for a good teacher and how to make the proper adjustments to compensate for inadequacies in language and perceived cultural differences (Li et al., 2011). Given that an interactive style not only appeals to students but supports student learning (Ashavskaya, 2015), more recent research has focused on the behaviors that contribute to immediacy in the ITA classroom (Jarvis & Creasey, 2012). As part of this rapport, humor as a communicator style deserves some recognition as a method to improve ITA classroom efficacy and increase interpersonal relations and group cohesion (Li et al., 2011). Although numerous studies confirm that using humor in the classroom or in social interactions requires a high level of proficiency (Bell, 2006, 2007a, 2009; Davies, 2015; Wulf, 2010) and a strong understanding of cultural practices (Bell, 2007b, 2011; Davies, 2003), humor remains a topic of research that draws a connection between language, culture, and the classroom.

Humor

Humor requires social competence because much of humor relies on comprehending conversational inferences in real time and processing language nuances to inject humor into the conversation (Davies, 2003; Kotthoff, 2007). Although humor can be casually woven into everyday conversations, it is not so effortless for speakers in an additional language. To start with, joking is often spontaneous as people play with conversational language (Bell, 2007b; Bell & Attardo, 2010). Spontaneous humor is more prevalent since scripted humor is often thought to be juvenile and less valued (Bell, 2013). With conversational humor, humor is a co-constructed effort as multiple parties work together for its creation (Bell, 2009; Matsumoto, 2014). In such a situation the listeners often have no warning that an utterance is supposed to be humorous, and the rapid pace of a conversation often prevents the non-native speaker from evaluating whether something is funny or not, let alone inserting a suitable rejoinder (Bell, 2007a; Carrell, 1997). While jokes can be repeated, often the reiteration dilutes the wit of the original repartee. Such repetition might be face-threatening to the language learner, but failure to understand humor is usually of less consequence than being unable to comprehend a serious conversation (Bell, 2013). In humor, non-native speakers are often positioned as outsiders (Bell, 2006; Kayi-Aydar,

2014). However, research indicates that non-native speakers could shift from the role of outsider to insider as they used more humor and developed more friendships (Kayi-Aydar, 2014).

Comprehension of humor often requires cultural knowledge of the schema or context that is being parodied (Bell, 2007b, 2011; Davies, 2003). Specifically, the cultural knowledge on which jokes are based may not be known by the non-native speaker because it may be based on insider information (Bell, 2005, 2011). Cultural knowledge provides the foundation of a lot of humor because individuals must decode the cultural denotations and connotations of the words in a joke to fully comprehend the meaning (Bell & Attardo, 2010). In addition to understanding the meaning of individual words or phrases, comprehending humor often requires knowledge of pop culture which may be unfamiliar to non-native speakers (Bell, 2006; Kayi-Aydar, 2014). Since humor varies across cultures (Bell, 2007a; Bell & Attardo, 2010; Moalla, 2015), topics that may be funny to joke about in one culture may be viewed as offensive or inappropriate for humor in another culture or setting (Carey, 2014). While humor can function as an exclusionary device to internationals who are not familiar with the culture (Bell, 2005; Kayi-Aydar, 2014), non-native speakers can exploit their status as being "the other" to use linguistic and cultural differences for humorous purposes (Bell, 2011; Moody, 2014).

Humor is a difficult topic to master in a non-native language due to the linguistic skills that are needed to convey humor (Bell, 2006, 2007a, 2009; Davies, 2015; Wulf, 2010). To produce humor, a person must be able to manipulate language by playing with the language's forms or meanings (Bell, 2006, 2012). Such a skill is easier for language learners of advanced language proficiency (Tarone, 2000). Another linguistic skill needed to produce humor is the ability to use language for symbolic references rather than to refer to physically present objects (Belz & Reinhart, 2004; Cook, 1997, 2000). Forman (2011) found that symbolic references in humor add another dimension to humor which often juxtaposes incompatible items to produce an underlying meaning other than the literal words of the discourse. Additionally, L2 speakers appropriate other voices to project humor into a conversation (Bell, 2005), such as parodying a teacher or a friend. Hall (1995) indicated that language competence involves learning to use a variety of voices for one's own benefit. Understanding how and why to use various voices for humorous purposes would also tie back to the cultural norms of humor as discussed previously (Tarone, 2000). Given the many different functions of humor, a variety of linguistic skills is needed to use humor effectively.

Humor is often a learned behavior that is not explicitly taught as part of a teacher education program. Specifically, Song and Gonzalez DelCastillo (2015)

found that international students did not receive cultural information as part of their teacher education program to implement humor into their instruction. However, Bell (2011) argued that humor is not a specific skill that can be taught as a formula; instead humor is one of the linguistic choices that a speaker has available and that can be used if desired. Nguyen (2007) observed that incorporating humor into a teaching repertoire enabled instructors to make connections with students. Although research indicates that humor in the classroom can increase instructional effectiveness and increase student engagement (Bell, 2009, 2010; Forman, 2011; Sidelinger, 2014), international instructors may be uncomfortable with this because using humor in the classroom may be inappropriate in different cultures (Bell & Attardo, 2010; Carey, 2014).

Beyond the cultural disinclination for humor in the classroom, this study seeks to explore what challenges that international instructors cite when using humor in the classroom. Specifically, the research question asks, “What barriers do international instructors self-report as serving as obstacles to their use of humor in English speaking university classrooms, and how do the ITAs respond to these challenges?”

Method

Participants

The participants in this study were twenty ITAs (ten males and ten females from thirteen different teaching content areas and fourteen different nationalities. This study occurred at a large research university in the Southeast United States. Recruitment of participants focused on students who had gone through the university’s formal ITA training classes. Calls for participation were also sent to departments that employed a high number of ITAs. The ITAs who participated in this study had taught for an average of three years at an American university and had resided in the United States for an average of five years. Participants who were teaching courses in the humanities were responsible for teaching two sections of the same course. On the other hand, ITAs from the sciences generally taught a lecture course or a lab where they supervised students’ experiments.

Data Collection

The study was part of a larger study on teacher identity development of international teaching assistants. As such, the research design involved an initial interview: each participant was interviewed individually to discuss their cultural backgrounds as students in their native cultures. The initial interview script was standard for all participants with questions

such as, “Tell me about your previous educational experiences,” or, “Describe what qualities make a good teacher in the United States.” As part of the first interview, spontaneous sub-questions were used to get the participant to elaborate on their initial responses when there was not much detail provided (Braun, Clarke, & Rance, 2014).

This interview was followed by a teaching observation in which a researcher watched and videotaped the participants teaching in a university classroom. Then the videotape was used as a basis for a follow-up interview during which the participant watched the video with the researcher who had videotaped the lesson so that the two could view and discuss critical incidents from the tape (Sherin & van Es, 2005). The second interview, which occurred while viewing the taped observation, focused on clarification questions from the first interview and on discussing incidents that occurred on the videotaped classroom. During this second interview, humor was a frequent topic because many of the participants tried to incorporate humor into their lessons, but humor was not targeted in the first interview, so that there was no pressure for the ITAs to showcase humor in their videotaped lesson. Each of the interviews was transcribed to aid in the data analysis, making a complete data set of forty interviews and twenty videotaped classroom observations.

Data Analysis

The data set was analyzed through thematic analysis (Braun & Clarke, 2013). Patterns and themes were developed through keyword searches and multiple readings (Braun et al., 2014). Consistent patterns across data sets were focused on identifying the participants’ portrayals of their future identities in relation to their current practices. Member checks were performed to clarify unclear portions of the transcripts. The transcripts were analyzed through narrative inquiry (Pavlenko, 2007) to provide a contextualized analysis of the ITAs’ experiences with humor. After identifying major themes, the data was grouped by themes for cross data set comparisons. The themes from the study revealed that the participants voiced four areas that presented obstacles to using humor in the classroom.

Findings

Cultural Challenges

First, many participants explained that in their U.S. classrooms they felt there were cultural expectations for humor which may not have been present in the classrooms of their native countries (Bell, 2009). To conform to this cultural expectation, participants

described their struggles to produce humor. One participant from Tanzania remarked the following:

Humor is important in the classroom because that's how you make the students feel comfortable or authoritative. Students can create the fun which they're looking for. I'm not good at it, but I would like to be able to use it often. Those who can, I would encourage them to do it because that's what students are looking for.

This ITA recognized the desires of the student audience and attempted to adapt his teaching to fit these expectations. Sentiments like this were echoed by several the ITAs in the study. Most described wanting to use humor in the classroom, yet often remarked that their unfamiliarity with the U.S. pop culture prevented an effective incorporation of humor. One participant offered the following:

I also observed some an American TA, and he can tell jokes, there in class or give some, um, um, yeah, give some or mention some name, or some actor or something like that. It makes the presentation very, very attractive, very, uh, spiring, inspiring. Uh, but for me, uh, it's hard to do that, yeah. Sometime, I do tell jokes or humor, but that's something we all understood.

This example illustrates why certain ITAs avoided cultural references and used a type of humor that appeals to a variety of cultures.

Other participants commented that humor was not a normal part of their native classroom context, hence they were uncomfortable with the whole concept of humor as part of teaching. Davies (2003) found that some authoritarian cultures do not encourage humor in the classroom because it interferes with the power distance that should be maintained between teacher and student. A Tanzanian participant described humor in his home country, 'It [humor] is rare, they don't usually tend to laugh.' Similarly, a participant from China noted the following:

Of course, you are allowed to use humor in China, but you know the professor tend[s] not to do it, they would more rather stay serious. Some of them, actually younger teachers, would like to do more joking things now in days.

While some participants acknowledged that humor was allowed in the classrooms of their native culture, it was not commonly practiced. To adopt a persona that used classroom humor required the participants to stretch beyond their comfort zones. For many of the ITAs,

humor was not part of their socialization norms of being a teacher.

Other participants described the challenges of having jokes that did not translate across cultures. For some of the ITAs, using topics that might be perceived as inappropriate in U.S. culture caused fear and trepidation (Carey, 2014). One woman from Spain remarked, "I feel here in America I can't joke the same way that [sic] in Poland, because here is not possible to joke with drinking alcohol for example, or some physical defect, religion." She later expressed fear of being labeled an alcoholic if she joked about drinking. Therefore, she was aware that certain topics are inappropriate to joke about in the United States, although she had been able to use those topics in other countries. Knowing what topics are appropriate in a U.S. classroom setting presented a challenge because it required a level of cultural familiarity. This insider knowledge is something that has to be learned over time and is not explicitly taught as part of an ITA program.

As a result, ITAs have to learn U.S. cultural information from their students through the form of incidental interactions. For instance, during one of the classroom observations, students were reading a textbook in a foreign language class and began teasing the ITA about the character named Fabio. This particular ITA had no idea who Fabio was and what the students found so humorous. Later, one of the researchers explained who Fabio is in the U.S. context, and the participant was able to understand the teasing of the students. While the students found the Fabio reference humorous, lack of cultural knowledge prevented the teacher from fully understanding the moment. As a result, the teacher initially felt like an outsider until the joke was explained.

Linguistic Challenges

Many of the participants acknowledged that while they lacked the the proficiency in English to use humor in the classroom, they found ways in which to compensate. For instance, one participant from Cameroon explained, "You require a lot of experience and a good mastery of the English language." He recognized that linguistic knowledge was needed to manipulate words to produce humor. Similarly, an ITA from South Korea offered the following:

English is not my native language. So, when I want to tell a joke to my students, to make them feel better, I still have a hard time. Oh, in Korea, you know, I can tell them anything, when class gets boring I try to oooh, kind of change the mood, or I do this instant activity. Something pops up, so I want to do that, in English, I don't think I'll be able to.

For many of the participants, their own perceived lack of English proficiency prevented them from attempting to insert humor into their instruction. Conversely, this same lack of proficiency can be used as a source of humor. A Peruvian ITA made this comment:

They love even when I cannot pronounce a proper name. Because I need to, 'Could you please repeat your name for me,' and I was trying to memorize, but the conversation is in English, so some sounds even are harder for me. If they would be in Spanish, it would be easier.

Some participants used their status as an English learner in humorous ways to highlight their speaking or pronunciation errors. This self-deprecating approach resulted in an increase in the students' level of comfort when risk-taking. An ITA teaching a foreign language class stated, "I always joke with my bad English because with this that is a real problem (laughs) for me, ...but they feel more comfortable because they don't . . . they are not afraid to [make] their mistakes, you know?" This ITA used her language struggles to create empathy between her and the students, who were also learning a foreign language as their content area.

Other participants commented that knowing multiple meanings for a word served as a rich basis for humor. One participant explained that students learning Spanish found humor in the double meanings of words, especially when the same word held completely different meanings in two different languages (e.g., cognates, loanwords, doublets).

There are some word [*sic*] that is completely different but they, the sound is the same. The other word in Spanish ah so is very with joke ah ah a lot [*sic*] about this because for example, el pie in Spanish is foot; in Polish it's a dog.

Having the linguistic knowledge of both the students' native and target languages enabled her to capitalize on the inherent humor involved in word meanings, thus make the learning experience more memorable.

Social Challenges

Using humor in the classroom did present the participants with some social challenges, but, as with the linguistic challenges, some found ways to compensate. One of the biggest struggles was voiced by a participant from Spain who admitted having difficulty knowing when her students were joking. In one instance, she explained being confused when a student asked if she was married. Her student stated, "Do you know, madam [laughs], do you know maybe some of us fall in love of you, and we need to know." She spoke

introspectively, "You never know if it's a joke or if it's, some real, you know?" This inability to identify a joke or to misconstrue a speaker's intent presented both a challenge and a barrier during social interactions.

Some participants expressed feelings of embarrassment when students were unable to comprehend their attempts at humor. Despite students not comprehending the ITAs' humor, most participants carried on with their teaching plan. They hoped that the students would see their awkward feelings after a joke failed, believing it was part of the overall joke. One participant from China explained that his use of humor sometimes worked, and other times did not. He commented:

Wasn't that easy, sometimes I think it's quite, you know, funny things I speak, and the students don't get it. And then I'll be embarrassing[*sic*]. And sometimes, I say something, and I really don't think it's funny, and the students start laughing. And it's, you know, things like that happen, and sometimes they'll get my joke, but anyways [*sic*].

A participant from South Korea who was successful with using humor in the classroom explained that she often relied on her own experiences as a source of humor:

Oh, I can tell them a joke, certain things that I remember, but it's always something that I have experienced, I mean I have to draw these ideas from my experience, not something new with my total creativity, you know what I mean?

Therefore, while participants were often unsure of student-initiated humor, they were more comfortable initiating humor themselves by sticking with content with which they were very familiar (Bell, 2007).

Authoritative Challenges

For many of the participants, using humor in the classroom brought about issues that challenged their authority as teachers. The ITAs acknowledged difficulty comprehending the humor initiated by their students, which often led to a loss of face if the joke was not comprehended. The line between having a friendly rapport with students and being too funny was a position where the ITAs had to find an appropriate balance. A male participant from Spain explains, "Sometimes you have to step aside and leave all joking aside, and say (to yourself), 'Hey, time out, it's the time now where everyone says I'm in charge, you are not.' Much to the dislike probably, but you have to." He noted that sometimes humor had to be abandoned in the classroom to reestablish authority.

In another example, a participant from Bulgaria described his philosophy of instructional humor as,

“You have to be very careful to make your humor help you in a point or help your students get involved in the topic.” This opinion was repeated by several other participants. An ITA from Spain gave some examples of her humor as she instructed her students to complete activities in Spanish about advice for anti-ecologists and the use of elephant tusks or how to become the fattest man in the world. The purpose of the humorous dialogues was to engage students in language learning activities while maintain authority by keeping students on task. She explained that “the good thing of the jokes, if it is good joke, [is] they relax the tension, the possible tension of the student.” Therefore, she affirmed the value of incorporating humor into classroom instruction in spite of the potential pitfalls of unsuccessful humor.

Others recognized the potential loss of face but chose to deal with it by simply stepping out of the role of teacher and into the role of the learner. As an example, a Brazilian ITA explained that she did not lack confidence in using humor; however, if she did not understand the humor in a joke, she would ask for clarification:

I have no problem asking them (students) something, sometimes I don't know what to say, a word in English and then I ask them.... And, then I say, you know, 'Explain to me what is that in a way that I can understand,' and then he did explain, and I understood, and, ok, I know what you're talking about, so that is this in Portuguese.

Admittedly, something is lost when a joke is explained, but asking for clarification is a simple but effective strategy that can make light of a tense situation. While the act of stepping down from the role of teacher to learner might be daunting to some, as a strategy, it builds rapport with the students while increasing teacher confidence.

Discussion

This study presents an initial foray into the self-reported obstacles that ITAs face using humor in the classroom. The data collected provides insight into the type of humor most accessible to ITAs and how certain communication strategies aided in successful humorous events. Despite the numerous difficulties of using humor by non-native speakers, findings from this research suggest that ITAs can both identify obstacles and discuss ways to compensate. The findings are a relevant and introductory look at humor in the ITA classroom. Consequently, this study contributes broadly to the research on ITAs which explores the intersection between language and culture in the classroom (e.g., Brown, 2008; Gorsuch, 2003; McCalman, 2007; Pomerantz & Bell, 2011), the more general investigations into humor and language (e.g., Bell,

2007a, 2007b; Carrell, 1997; Davies, 2003; Matsumoto, 2014; Reddington & Waring, 2015), and studies on humor and student learning (Sidelinger, 2014).

The ITAs' self-reported results confirm that the greater the distance from one educational environment to the next, the more resistant an ITA is to crossing the barrier. A reluctance to adapt to the new educational culture of the U.S. has resulted in many undergraduate students' negative ratings of ITA performance (Kang et al., 2015). The barriers of language, teaching, and culture are formidable. However, there are ways to mitigate the daunting task of teaching in a second language in a foreign country. Humor stands as one good example of how to strategically create cross-cultural connections in the classroom without compromising teacher authority or renouncing learned classroom ethics and practices. At its best, humor is an area which clearly breaks down teacher/student boundaries and represents a confluence where distinct and distant cultures intermingle. Decoding exactly how to use humor in the classroom is clearly a challenge for any L2 learner/instructor.

This research confirms findings that many ITAs who come from countries where there is a sharp distinction between teacher/student roles struggle with the less authoritarian teaching styles that U.S. classrooms present (Levis et al., 2012). Moreover, matching the uses of humor to procedural knowledge of U.S. undergraduate instruction challenges ITAs in terms of when, how, and where humor can improve student learning, lesson delivery, and teacher/student rapport. ITAs struggle to find ways to make the use of humor cross-culturally relevant. A Brazilian ITA did not understand, for instance, the reference to Fabio, while an ITA from Spain struggled with the question how appropriate certain uses of humor are in the classroom. A second teacher from Spain detailed an excellent account of how “joking around” with the instructor can lead to miscommunication, a perceived inappropriate comment, and “stepping over the line” of acceptable behavior concerning student/teacher verbal interaction (Skalicky, Berger & Bell, 2015). Although humor is an area which clearly redefines a traditional, teacher-centered classroom discourse (Nguyen, 2007), it serves as a marker for intercultural competence (Chiang, 2009; McCalman, 2007; Moeller & Faltin Osborn, 2014) and L2 development (Bell, 2009; Belz, 2002; Cook, 2002; Matsumoto, 2014; Tarone, 2000).

While all the ITAs had surpassed a minimum required score on the TOEFL or TSE exam to enter graduate studies, language proficiency remained a barrier to the use of humor in the classroom. This is not surprising considering the large amount of research into second language proficiency and teaching (e.g., Brown, 2008; Gorsuch, 2003; McCalman, 2007). What was not expected, however, is how the ITAs accommodated for

their limited proficiency in English by temporarily moving out of their role as teacher who is in charge to one in which they are the student learning about American humor (e.g., Moalla, 2015). ITAs accomplished this as they mispronounced words, made jokes about their struggles with English, or drew on cognates from their native languages and English as a source of humor.

Still others showed remarkable skills at using and understanding humor and perhaps represented the exception among the participants. An ITA from Spain commented on the importance of “drawing the line” in the classroom, thus demonstrating the knowledge of when excessive humor detracts from learning and exemplifies poor classroom management. The ITA from Bulgaria explained that humor is most effective when it is used to complement the content in the course (Li et al., 2011). Unlike their peers, these ITAs could step outside of their roles as teaching assistants, transcend the constraints of culture and language, and recognize the functionality of humor and effective classroom management. While they never suggested what they were doing was easy, such findings indicate that limited communicative skills or the cultural constraints of teaching in a new educational environment do not determine an ITA’s willingness or ability to make the adjustments that create successful classroom discourse.

Given the promise that this study shows as far as identifying the types of barriers that these ITAs faced in the classroom, this research could be expanded to study the linguistic composition of the barriers that humor presents and how ITAs overcome these linguistically. Additionally, more research could be conducted on how the incorporation of instructional strategies as part of ITA training could help the ITAs be more successful in addressing the barriers that humor presents in non-native instructional discourse.

In the broadest sense, each participant sought ways to transcend the traditional teacher-student dynamic by utilizing strategies that incorporated humor into their teaching. By doing so, the ITA demonstrated an understanding that humor creates cross-cultural connections, improves student interest in course content, and positively affects teacher immediacy and learning (Forman, 2011). To date, current ITA research as it relates to humor has not been forthcoming, and more research is recommended. Studies are needed which catalogue the kinds of speech acts used and understood by non-native speakers when faced with the kinds of cultural barriers the classroom presents.

Clearly a mismatch exists for a great number of ITAs that begin their teaching careers in a new educational culture and language environment (Gorsuch, 2012). The use of humor as a communicator style and teaching strategy remains out of reach for

many ITAs beginning the journey. It is also difficult to imagine ITA educators taking the time in an already truncated, intensive training program to incorporate the teaching of humor into the curriculum. However, the interviews conducted in this research indicated that all participants recognized the difficulty, and yet they indicated a desire to weave humor into their instructional practices. Research supports this belief that humor positively affects teacher immediacy and enhances student learning (Forman, 2011). To this end, ITA educators should not dismiss out-of-hand the role and functionality humor plays in U.S. undergraduate classroom discourse, nor how humor increases exposure to the target language and culture, thus aiding ITA language learning and acquisition.

Conclusion

Future research on the study of humor in the classroom within the ITA research is complicated. How does one teach someone to be funny? The adage, “If you have to explain the joke, then it is not funny anymore,” is a type of common intervention and would probably not be an appropriate path for future research. Still, the value of humor in the classroom—the ways it intersects with culture, language proficiency and teaching—is undeniable. From a procedural perspective, as described in Gorsuch (2012), it would be valuable to understand more about the decision-making processes experienced teachers, ITAs, and TAs make when using humor in the classroom. Careful analysis of classroom transcripts coupled with observations and discussion of classroom culture could provide a valuable contribution into the research exploring ITAs, language, and culture, as well as inform research into the subtle connections between second language proficiency and teaching behaviors. ITA research would benefit from additional research into humor, as humor plays an established role in building rapport with students and effective teaching.

Given the benefits that humor can contribute to instruction, it should be addressed in an ITA training curriculum. However, while teaching humor as a prescriptive topic would not help ITAs implement humor into their teaching repertoire (Wulf, 2010), and ITA educators should be careful to explain what sorts of humor would be inappropriate in higher education (Bell, 2009), as one department did during this study. Alerting ITAs to the topics that could be considered offensive to university students would set some parameters for humor and potentially save the ITA from an unwittingly awkward or volatile situation (Bell, 2010).

While the ease of using humor in the classroom comes with practice, encouraging ITAs to implement rapport strategies like humor in the classroom would increase the immediacy between the ITAs and their

students (Bell, 2006). The benefits of building rapport between ITAs and students would make positive contributions to higher education. Zhang (2014) argued that rapport is a major factor in international instructors' authority in the university classroom as it serves to foster positive attitudes towards them. Bridging the gap between teacher and student can facilitate student learning as the instructor becomes more approachable for the student to seek help with course content (LeGros & Faez, 2012). While approaches to humor may vary from person to person and even culture to culture (Bell, 2007a), ITAs who are open to using rapport strategies like humor in the classroom will make learning more memorable and engaging for their students. Furthermore, taking the steps to build connections between ITAs and their students can have long reaching effects for higher education as ITAs become more integrated into higher education and students gain experience in cultural competence.

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“Then What Am I Paying You For?” Student Attitudes Regarding Pre-Class Activities for the Flipped Classroom

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Existing research on student acceptance of the flipped classroom in higher education is somewhat equivocal: some students appreciate the opportunities for active learning that a flipped classroom affords, whereas others expect their learning to occur via in-class lectures. The current study sought to disentangle some of these mixed results by manipulating aspects of hypothetical flipped and traditional classroom environments through a vignette comparison approach. In the first study, a third of the participants reported a preference for a flipped classroom that utilized video lectures as the primary pre-class preparation activity, in comparison to a traditional classroom characterized by at-home reading and in-class lecture. In contrast, the second study demonstrated that half of the sample preferred the flipped approach when the pre-class participation activity was presented as a menu of choices including, but not limited to, video lectures. Across both studies and class preferences, quantitative and qualitative analyses indicated that participants believed they would learn more in their chosen class environment, and they attributed more positive personal characteristics to their preferred instructor. Implications for instructors contemplating a switch to the flipped classroom from a more traditional approach are discussed.

If the quantity of news articles and professional development seminars regarding an instructional method is any indication of that method's quality, then all instructors should immediately adopt the flipped classroom. The reality, however, is that few well-controlled studies of the flipped college classroom exist (Hamdan, McKnight, McKnight, & Arfstrom, 2013), and the results of such studies are somewhat equivocal in terms of the effectiveness of the strategy. That is, although instructors assume that the inclusion of at-home video lectures will be a welcome change for today's tech-savvy students, and although many students do embrace this pedagogical innovation, some college-level “flippers” have reported *decreased* or equivalent student engagement when compared to more traditional formats (O'Flaherty & Phillips, 2015). Because the flipped classroom can be very time-consuming to implement (i.e., many new “flippers” find themselves in the position of creating new sets of both in- and out-of-class activities), it is essential that we continue to examine the conditions under which flipping is and is not effective. The current mixed methods study utilizes vignette comparisons to examine student attitudes regarding different types of pre-class activities in flipped classrooms.

The Flipped Classroom

In a traditionally structured course, class time is often dedicated to the absorption of content through instructor-led lecture, and time outside of the classroom focuses on homework assignments for which students are expected to utilize higher levels of cognition (McGivney-Burelle & Xue, 2013). In contrast, a flipped

course assigns the absorption of content for homework, thus freeing up class time for interaction and application. The most common presentation of such an inverted classroom utilizes pre-recorded video lectures to disseminate out-of-class content, although some have maintained that it is the timing and location of the learning activities and not the format of the learning materials that determines the flipped classroom (Kim, Kim, Khera, & Getman, 2014). Regardless of format, in-class activities in the flipped classroom are thought to promote the development of higher-order thinking skills, whereas time spent outside of class targets lower-order cognition (McGivney-Burelle & Xue, 2013).

Currently, most information regarding the flipped classroom is disseminated using news articles and websites (Hamdan, McKnight, & Arfstrom, 2013), but preliminary work targeting its effects on the learning and motivation of college students has started to accumulate. Thus far, experimentation with the flipped college classroom has favored STEM domains such as biology, calculus, physics, and statistics (Gilboy, Heinerichs, & Pazzaglia, 2015; Jungic, Kaur, Mulholland, & Xin, 2015; McGivney-Burelle, & Xue, 2013; Moravec, Williams, Aguilar-Roca, & Dowd, 2010; Stelzer, Brookes, Gladding, & Mestre, 2010; Talley, & Scherer, 2013; Wilson, 2013). Results of these and other studies have been somewhat equivocal with regard to the efficacy of the flipped classroom. That is, although comparisons of course performance in flipped and traditional classrooms sometimes give the flipped classroom an edge (e.g., Baepfer, Walker, & Driessen, 2014; Deslauriers, Schelew, & Wieman, 2011; Moravec et al., 2010; O'Flaherty & Phillips, 2015; Peterson, 2016), some studies have found no performance advantage to flipped

classrooms at all (e.g., Clark, 2015; Findlay-Thompson & Mombourquette, 2014; Leicht, Zappe, Litzinger, & Messner, 2012; Morin, Kecskemety, Harper, & Clingan, 2013; Rais-Rohani & Walters, 2014).

In addition to ambiguity regarding the academic outcomes of students in a flipped classroom, the literature indicates similar confusion regarding motivational and engagement outcomes. In terms of motivation, the logical assumption is that students will find the flipped classroom more engaging than the traditional format. Shifting lecture outside of class frees up time for in-class group work and hands-on activities that students seem to enjoy. Some work corroborates this assumption, as students in a calculus course praised the flipped classroom for its engaging and exciting environment (Jungic et al., 2015). This finding was echoed in the work of Kim and colleagues (2014), who found that students in flipped classrooms rated the learning environment as student-centered. Additionally, Wilson (2013) reported that participation in a flipped classroom environment was associated with a decrease in undergraduates' reported level of anxiety in their statistics course.

Despite these encouraging findings, some work suggests that not all students prefer to learn in a flipped classroom environment. Students new to the flipped classroom may approach this departure from traditional formats with frustration and resistance, which results in decreased ratings of student satisfaction (Ferreri & O'Connor, 2013; Gilboy et al., 2015; Herreid & Schiller, 2013; Missildine, Fountain, Summers, & Gosselin, 2013). In his study of the effects of learning in an inverted classroom, Strayer (2012) indicated that college students in the flipped section of his statistics course reported lower levels of satisfaction with the organization of learning tasks in comparison to students in the traditional section. In addition to lower course satisfaction, some learners may see the shift toward self-guided learning and lack of direct instruction as initially unreasonable (Peterson, 2016); although pedagogical experts recognize the superiority of student-centered learning environments, some students are reluctant to embrace a shift away from teacher-directed learning (Wilson, 2013).

The Current Study

It seems that instructors are at a crossroads: we have been presented with a new pedagogical approach associated with much media chatter and a high level of face validity but with mixed empirical results. Additionally, full implementation of the flipped model takes a lot of effort on the part of the instructor: effort that may not be rewarded with concomitant increases in student performance, motivation, or satisfaction. Instructors who flip their course for the first time often

find the process to be lengthy and time consuming (Hoffman, 2014; Hussey, Richmond, & Fleck, 2015; Mason, Shuman, & Cook, 2013; Schlairet, Green, & Benton, 2014). Creating, editing, and posting lecture videos and developing in-class activities that target higher-order cognition are tasks that instructors may not be accustomed to incorporating into traditional course preparation (McGivney-Burelle & Xue, 2013). As such, is it fair to ask instructors to commit to flipping their courses, a task which requires so much of an instructor's already insufficient time, when we are not sure of the efficacy of an inverted classroom in the first place?

To contribute to the literature on the flipped classroom, and to clarify why some instructors are met with student praise for a flip, whereas others are met with consternation, two mixed methods studies were devised. In Study 1, we asked students to rate the quality of two hypothetical instructors of an introductory psychology class—a traditional instructor who utilizes in-class lectures with at-home application activities and a flipped instructor who assigns video lectures for homework and application activities in class. This approach allowed us to assess the following research questions: 1) If given the choice, which learning environment would college students prefer: a flipped classroom or a traditional classroom?, 2) What assumptions do college students make about instructors, given the course format they utilize?, and 3) What drives student preferences in course choice?

As presented below, we were surprised by the class preference data collected in Study 1, so we designed a follow-up study to examine whether an expanded definition of the flipped classroom (Hussey et al., 2015; Kim et al., 2014) would alter classroom preference. That is, instead of confining pre-class activities to the viewing of video lectures, we included a menu of potential preparation activities from which the students could choose. Because some students see the viewing of video lectures as unnecessarily time-consuming (O'Flaherty & Phillips, 2015), we formulated a final research question: 4) Do students prefer the flipped classroom approach when pre-class preparation includes, but is not limited to, video lectures?

Study 1

Method

Participants. One hundred fifty-nine undergraduate students (99 females; 60 males) from a master's/comprehensive university participated in this study. The sample was comprised of 83 freshmen, 38 sophomores, 28 juniors, and 10 seniors. Race and ethnicity data were not obtained in this study, but the university from which the sample was drawn had a student population that was 84% white at the time of data

collection. Participants came from a departmental subject pool consisting of several hundred students, each of whom was taking one or more psychology courses at the time of the study. Research participation was included among several options afforded to students in partial fulfillment of course requirements. The authors of this study were not teaching any of the participants at the time of data collection, which spanned a full academic semester.

Materials and procedure. Approval from the Institutional Review Board was obtained for the following research procedures. After indicating consent to participate via an online survey, participants were asked to select which of two instructors they would prefer if given the choice of instructor for an introductory psychology course. Participants were informed that the instructors are equivalent in nearly every way—both use the same textbook, assignments, and assessments, and both have the same quality rating on RateMyProfessor.com. They were also informed that, “The only difference between the two professors is the way in which each individual structures the course.” Participants were then presented with the following vignettes:

Mr. Jones structures his course so that his students are exposed to information for the first time in his classroom. Although students are expected to complete reading assignments in the textbook prior to class, Mr. Jones uses lecture and in-class videos as the primary mechanisms for communicating class content. A brief comprehension quiz is given in class every week. Students receive feedback regarding their performance during the next class meeting. All assignments and projects are completed outside of the classroom, in the students' own time. *In sum, time in Mr. Jones's classroom is spent absorbing information through professor-led lecture, whereas time outside of his classroom is spent applying information through assignments and readings.*

Mr. Davis structures his course so that his students are exposed to information for the first time before they come to the classroom. Specifically, students are expected to watch videos of short, pre-recorded lectures in their own time, which are followed by a brief online comprehension quiz. Students receive immediate feedback regarding their performance. Class time is used to discuss the pre-recorded lectures, as well as to complete group activities and hands-on projects. *In sum, time in Mr. Davis' classroom is spent applying information through student-led discussions and group projects, whereas time outside of his classroom is spent absorbing information through pre-recorded lectures.*

The vignette of Mr. Jones was designed to depict a traditional classroom environment, whereas the vignette

of Mr. Davis was designed to depict a flipped classroom environment in which out-of-class video lectures were the primary means of content dissemination. The labels “flipped” and “traditional” were not presented to the participants, however, given such labels might bias students in favor of or against one of the teachers. After reading both vignettes, participants were asked to evaluate the personal and pedagogical characteristics of each instructor through seven items rated on a 1-5 Likert scale, with lower scores indicating less of the relevant construct (see Appendix A). Participants were also asked which instructor they would select for the course (Mr. Jones, Mr. Davis, or No Preference), and they were asked to respond to the following open-ended item: “Please explain why you chose the professor that you did. (If you have no preference, please explain this as well).”

Results

Quantitative analyses. Eighty-four participants (50.6%) preferred the traditional classroom environment, while 60 participants (36.1%) preferred the flipped classroom environment. Fifteen students (9%) indicated “No Preference.” Class preference was not qualified by participant gender ($\chi^2(2) = 1.769, p = .413$) or participant year in school ($\chi^2(2) = 4.318, p = .634$).

Repeated measures t-tests were used to explore participant views of personal and pedagogical characteristics of the hypothetical instructors (see Table 1). For the 50.6% of participants who preferred the traditional environment, the traditional instructor was rated more positively than the flipped instructor in a variety of areas. Specifically, among those with a traditional classroom preference, the traditional professor and his class were viewed as more interesting and more useful than the flipped class. These participants also believed that the traditional class would lead to higher student attentiveness, better grades, and more significant learning. Additionally, although these students did not rate the traditional professor as more fun than the flipped professor, they did rate him as more approachable.

For the 36.1% of participants who preferred the flipped classroom structure, ratings of the flipped instructor were high (see Table 1). Specifically, the flipped professor was rated as more interesting, more fun, more useful, and more approachable than the traditional professor. Also, although these participants expected that they would learn more and would be more attentive in the flipped class, they did not expect that they would make a better grade when compared to the traditional class.

Qualitative analyses. Utilizing open coding procedures, a thematic analysis of the participants' responses to the open-ended statement, “Please explain

Table 1
Study 1: Differences in Ratings of Instructor Characteristics, by Classroom Preference

<i>Ratings of Instructor</i>	Traditional Preference		<i>T-test</i>	Flipped Preference		<i>T-test</i>
	Traditional Instructor	Flipped* Instructor		Traditional Instructor	Flipped* Instructor	
Interesting	4.18 (.70)	3.33 (1.03)	$t(83) = 5.861, p < .001$	3.10 (1.02)	4.40 (.67)	$t(59) = -9.078, p < .001$
Fun	3.51 (.75)	3.19 (1.00)	$t(83) = 2.301, p = .024$	2.67 (.90)	4.17 (.67)	$t(59) = -9.356, p < .001$
Useful	4.21 (.66)	3.35 (1.01)	$t(83) = 6.232, p < .001$	3.67 (.93)	4.32 (.60)	$t(59) = -4.634, p < .001$
Quality of Learning	4.31 (.71)	3.01 (1.05)	$t(83) = 9.747, p < .001$	3.33 (1.05)	4.20 (.78)	$t(59) = -4.651, p < .001$
Grade	4.41 (.67)	4.08 (.84)	$t(79) = 2.965, p = .004$	4.29 (.97)	4.24 (.82)	$t(59) = .339, p = .736$
Students Off-Task in Class	2.88 (1.05)	3.62 (1.13)	$t(83) = -4.780, p < .001$	3.63 (1.09)	2.77 (1.14)	$t(59) = 3.833, p < .001$
Approachable	4.01 (.74)	3.55 (.92)	$t(83) = 3.380, p < .001$	3.25 (1.00)	4.40 (.56)	$t(59) = -7.765, p < .001$

* In Study 1, the flipped instructor was characterized as providing only video lectures for out-of-class work.

Note: Gray shading indicates a significant mean difference in favor of the shaded instructor for that item ($\alpha = .01$).

why you chose the professor that you did,” was conducted. Among those students preferring the traditional instructor, the most frequently mentioned reason for that preference was a belief that they would learn more in that setting (33.3% of the 84 participants preferring the traditional class mentioned this).

For example, one response read, “I think that [the traditional instructor] is all about learning the material that you need and understanding it. In the long run, that’s all that matters.” Additionally, 28.6% stated that they prefer for their learning to happen in the context of in-person lectures. One student commented, “From personal experience, I do much better learning lectures in the classroom rather than outside the classroom. I am more prone to pay attention in a classroom setting and therefore will absorb the information better.” Other popular rationales for the traditional class choice included a preference for teacher-directed (as opposed to student-directed) learning (16.7%), as well as perceiving less student effort required in the traditional course (15.5%). For instance, one participant explained, “I would rather have material explained to me instead of learning it on my own, and I am not always motivated to learn on my own.”

As was the case for students preferring the traditional instructor, thematic analysis indicated that 33.3% of those who selected the flipped instructor believed that they would learn more in that classroom environment. For example, one student stated, “I would chose [the flipped instructor] as my professor because I think it would help me learn more about the subject unlike [the traditional] class where I would just memorize the information.” 23.3% justified their choice by expressing a dislike of the in-class lecture format, and many of the participants mentioned a preference for various aspects of active learning, including a preference for classroom discussion (21.7%) and a preference for hands-on activities (25%). These themes are reflected in the following response:

I chose [the flipped instructor] because I am a hands on learner. I tend to learn better when I can interact with others and walk through what we are learning. I think having classes based on discussions and activities would boost my confidence to speak up to my classmates and teacher but also to learn by discussing the material daily.

Lastly, many participants assessed that the flipped class would be more fun or entertaining (21.7%), including the student who stated the following:

I would pick [the flipped instructor] because he seems to make sure that his class is exciting and hands-on. If I was in the other class . . . I would be tempted to use my phone or zone out, or even not come to class.

Study 2

Method

Participants. Three hundred twelve undergraduate psychology students (154 females; 158 males) participated in this study. The sample was comprised of 138 freshmen, 88 sophomores, 43 juniors, and 43 seniors. Participants were solicited via the same method utilized in Study 1, and potential participants were excluded if they had already participated in the first study.

Materials and procedure. Identical procedures and materials were utilized here as in Study 1, with one change to the presented vignettes. For the flipped instructor, after the opening sentence of the vignette, participants were notified that, “this exposure [to class content] is aided by the use of many different mediums, such as online instructional lectures, demonstrational videos, documentaries, research exploration, and traditional text. For each topic, students have access to these different mediums and can choose those they feel

Table 2
Study 2: Differences in Ratings of Instructor Characteristics, by Classroom Preference

<i>Ratings of Instructor</i>	Traditional Preference		<i>T-test</i>	Flipped Preference		<i>T-test</i>
	Traditional Instructor	Flipped* Instructor		Traditional Instructor	Flipped* Instructor	
Interesting	4.03 (.74)	3.02 (.93)	$t(100) = 4.189, p < .001$	3.48 (1.02)	4.26 (.64)	$t(175) = -15.57, p < .001$
Fun	3.42 (.83)	2.41 (.80)	$t(100) = 1.892, p = .061$	3.17 (1.02)	4.03 (.70)	$t(175) = -20.235, p < .001$
Useful	4.09 (.68)	3.61 (.73)	$t(100) = 6.020, p < .001$	3.50 (.84)	4.17 (.61)	$t(175) = -9.274, p < .001$
Quality of Learning	4.14 (.72)	3.34 (.85)	$t(100) = 8.656, p < .001$	3.11 (.95)	4.23 (.64)	$t(175) = -10.793, p < .001$
Grade	4.55 (.56)	3.97 (.71)	$t(100) = 6.464, p < .001$	4.06 (.84)	4.57 (.59)	$t(175) = -10.957, p < .001$
Students Off-Task in Class	2.96 (1.02)	3.62 (1.05)	$t(100) = -4.103, p < .001$	3.49 (1.08)	2.72 (1.05)	$t(175) = 8.610, p < .001$
Approachable	3.77 (.72)	2.97 (.85)	$t(100) = -.895, p < .378$	3.94 (.68)	4.24 (.76)	$t(175) = -9.479, p < .001$

* In Study 2, the flipped instructor was characterized as providing a menu of options for out-of-class work.

Note: Gray shading indicates a significant mean difference in favor of the shaded instructor for that item ($\alpha = .01$).

aid their learning process best.” By making this alteration, we provided the participants with an expanded conceptualization of the flipped classroom that is not necessarily tied to the use of pre-recorded instructor lectures (Hussey et al., 2015; Kim et al., 2014).

Results

Quantitative analyses. One hundred one participants (32.4%) preferred the traditional classroom structure, while 176 participants (56.4%) preferred the flipped classroom structure. Thirty-five students (11.2%) indicated “No Preference.” Class preference was not qualified by participant gender ($\chi^2(2) = .248, p = .884$) or participant year in school ($\chi^2(2) = 6.636, p = .356$).

As was the case in Study 1, instructor preference was partially explained by participant ratings of personal and pedagogical characteristics. T-tests related to these characteristics are presented in Table 2. Once again, those who preferred the traditional instructor rated him as more interesting and more useful, but not as more fun than the flipped instructor. Participants also expected that they would pay more attention, would learn more, and would receive a better grade in the traditional class. As a point of departure from Study 1, students who selected the traditional instructor did not rate that instructor as more approachable than the flipped instructor in this study.

Examination of instructor ratings for those students who preferred the flipped classroom environment revealed uniformly positive comparisons for the flipped instructor (see Table 2). These participants rated the flipped professor as more interesting, fun, useful, and approachable than the traditional professor. Also, these participants expected that they would be more attentive, they would make better grades, and they would ultimately learn more in the flipped classroom.

Qualitative analyses. A thematic analysis of the participants’ responses to the open-ended question requesting justification of their instructor preference revealed interesting trends. In the first study, the most

commonly cited justification for a traditional classroom preference was the assessment that the students would learn more in that environment. Although 17.8% of Study 2 participants did comment that they felt the traditional classroom would yield greater learning, 30.7% of the participants indicated a strong preference to learn via lecture. Students preferring the traditional structure also mentioned a preference for lecture to occur in-person (as opposed to via video; 13.9%), as well as the belief that learning should be teacher-directed (20.8%). A sample participant response containing many of the most prevalent themes is as follows:

[The traditional instructor] is actually teaching the information and giving students the tools necessary to apply the knowledge to tasks. [The flipped instructor] is relying on other sources to teach his students and then helps them apply the knowledge learned from pre recorded lectures. I feel like I would personally prefer [the traditional] class because I learn better from hearing lecture in a classroom setting than by watching videos and reading

In contrast, thematic analysis of the open-ended responses for the 56.4% of the sample that preferred the flipped class indicated that many participants selected that classroom because they believed it would lead to higher quality learning (28.1%). As was the case in Study 1, many participants mentioned aspects of active learning as the reason for their choice of the flipped classroom, including a preference for discussion (16.9%), hands-on experiences (17.4%), and applied activities (16.9%). Such themes are reflected in this comment:

With [the flipped] class I would be able to get an idea for the material before class then when in class I can focus on asking questions and applying it to make sure I really understand it. Unlike in [the traditional] class where the class time would focus

on learning the material then leaving the classroom to do the activities and thinking of questions as you're doing the work where you don't have him available to ask.

Additionally, these participants commented that the flipped classroom instructor would likely be more fun/interesting (28.1%) and more approachable, comfortable, or helpful (16.9%) than the traditional instructor, as reflected in this comment:

I feel as though [the flipped instructor] would seem much more approachable about learning and the classroom environment, which is very important to me. There is nothing more debilitating than a professor who is unapproachable. [The flipped instructor] also seems to cater more to students learning styles, which is important because not every student does well in learning straight from a lecture.

Discussion

General Findings

The current studies utilized quantitative and qualitative analyses to assess student perceptions of instructors associated with flipped and traditional learning environments. To answer our first research question, "If given the choice, which format would college students prefer—a flipped classroom or a traditional classroom?" we asked students to select their preferred classroom format after reading vignettes involving hypothetical course instructors. When the flipped classroom was conceptualized as involving video lectures for homework and applied activities during class time, only a third of the sample selected the flipped professor as the more desirable option. In contrast, when the homework activities were expanded to involve a menu of options (including, but not limited to video lectures), half of the respondents had a preference for the flipped classroom. This finding helps us to address research question four: "Do students prefer the flipped classroom approach when video lectures are an optional, but not required, component of pre-class preparation?" The results from Study 2 suggest that students do prefer certain presentations of the flipped classroom environment.

To answer research question two, "What assumptions do college students make about instructors, given course format?" we compared instructor ratings by student preference. In general, students ascribed more positive characteristics to the instructor and course environment that they selected as preferred. However, in both studies, although the students with a flipped preference rated the flipped instructor as the most fun, students with a traditional preference did not view the

traditional instructor as more fun than the flipped instructor. Additionally, in Study 2, students with a traditional preference did not view the traditional instructor as more approachable than the flipped instructor. This suggests that, for students preferring the traditional classroom, assessments of the instructor's approachability and entertainment potential may not weigh into course preference or satisfaction to the extent that they do for students with a flipped classroom preference. This interpretation was supported via the qualitative comments the students provided regarding their preferences. For example, one student noted, "I would prefer [the traditional instructor] because he has a traditional sense of teaching and wants students to understand rather than have fun in class." At least for this student, learning and fun are at cross-purposes.

To answer our third research question, "What drives student preferences in course choice?" we asked students to explain why they preferred the course that they did. An analysis of themes indicated that the most common explanation provided, across studies and preferences, was that their selected instructor would help them to "learn more." Despite this commonality, analysis of the second and third most common explanations by preference indicates a clear difference in what "learn more" means to different students. For example, students preferring the traditional format exhibited a strong preference to "learn through lecture" through teacher-directed instruction. As many of the comments indicated, students who prefer traditional classrooms view learning as the absorption of content from an expert. One student noted, "I think most people have learned the way that [the traditional instructor] teaches and we are used to that. If we were in [the flipped class], that could easily be an online class, and why do you need a professor if you're learning outside of the classroom?" A second student noted, "If I can learn the material on my own, there is no need to pay a professor to give me assignments or for me to go to class."

In contrast, across both studies, students with a flipped classroom preference felt that the flipped class would afford greater opportunities for active, hands-on learning: something that many students viewed as essential to a strong learning environment. One student noted, "While [the flipped] class might take more work, I feel like it would be more engaging and not as boring as [the traditional] class. I feel like I would actually learn something and learn more effectively this way." These students also expressed disdain for utilizing class time for lecture and felt that classrooms should be student-centered. A student reflected on the differences between the instructors in this way:

Lecture classes are often dry and endless and quite frankly no one knows if they've even learned

anything until they sit down and try to apply it. I take great notes in my chemistry class but when I sit down to do problems is when I actually know what I understand and don't understand. A class where you learn how to apply the information is a class where you'll actually be forced to show that you understand versus what you can memorize and spit back up for a test.

In contrast to students preferring the traditional classroom environment, no student preferring the flipped format mentioned “less required effort” as an explanation for his or her preference.

Taken together, our results replicate many of the findings currently presented in the literature. On the one hand, there is evidence that students do prefer some presentations of the flipped classroom format (e.g., Davies, Dean, and Ball, 2013; Gilboy et al., 2014). However, in other situations, a traditional classroom environment is preferred (e.g., Missildine et al., 2013; Strayer, 2012). Even in cases where the majority of the sample prefers the flipped classroom, a vocal anti-flipping minority usually exists (Findlay-Mombourquete, 2014; O’Flaherty & Phillips, 2015). Sometimes, the complaints of this minority concern perceptions that flipped classrooms require excessive effort (Ferreri & O’Connor, 2013). At other times they seem to represent misunderstandings regarding the nature of learning (i.e., that learning is only about absorption) or the function of a university (e.g., “My problem with that is I am not paying [the university] to teach myself . . .” Wilson, 2013, p.6). Although these studies do not conclusively resolve any of the current debates regarding the flipped classroom, they do provide provocative results that are relevant, both to practitioners considering the application of this method to their own classrooms and to scholars interested in studying the utility of the flipped approach.

Limitations

The most obvious limitation of this study is that participants were asked to share their opinions regarding a hypothetical situation: none of the students actually took a flipped class as a condition of participation. The participants also constitute a volunteer sample, as research participation was one of several options presented to fulfill course requirements: it is possible that the students who selected research participation systematically differ in some way from students who elected to analyze research articles to fulfill requirements, for example. It also bears noting that the sample contained more females than males and was predominantly white, which limits generalizability to more diverse samples. Additionally, although all participants were drawn from the same population,

different samples of students participated in each of the two studies, which could have biased our results. Nevertheless, our results parallel those of studies that did include actual manipulations of course format (e.g., Gilboy et al., 2015; Lage, Platt, & Treglia, 2000), which lends legitimacy to the vignette approach for the assessment of attitudes regarding flipped classrooms.

An additional limitation concerns the measure used to assess the personal and pedagogical characteristics of the hypothetical instructors (see Appendix A). A single item was used to assess each relevant construct, which greatly constrains the reliability of the variables of interest. As such, future explorations might wish to utilize validated measures of teacher qualities, such as the Teacher Behavior Checklist (Keeley, Smith, & Buskist, 2006).

A final limitation concerns the participants’ potential lack of familiarity with a flipped classroom course design. Participants were not presented with the labels “traditional” or “flipped,” and in some of the open-ended responses, a few students provided comments such as, “I have never had a class like [the flipped class] before.” Equivalent statements were not made in the case of the traditional classroom vignette. Therefore, students may have been better able to predict their attitudes regarding the traditional class than the flipped class. As such, future studies utilizing manipulations of this variety should consider assessing student familiarity with various course designs as a potential covariate.

Implications

Despite limitations, the results of these studies have interesting implications for instructors considering implementing the flipped classroom. First, the most obvious implication of our work concerns the use of video lectures as the primary method of content dissemination in a flipped course. When presented with the opportunity to take a class that involved out-of-class video lectures, only a third of the sample rated the flipped environment as preferred to the traditional class environment. However, after simply adding a menu of options for the purposes of pre-class content absorption (which included, but was not limited, to video lectures), over half of the sample selected the flipped class as the preferred option. These results make sense in the context of Self-Determination Theory, which postulates that the provision of choice leads to increases in student agency, such that students are more likely to invest the effort and engagement necessary to succeed (Ryan & Deci, 2000). Perhaps the participants in the current studies recognized a potential for agency in the flipped classroom with the pre-class menu that was not present in the flipped classroom with video lectures alone.

Our findings also help to contextualize common criticisms of the traditional classroom environment. For example, some have argued that the problem with

lecture-focused classes is not the presence of the lecture in the course, but the timing of that lecture (e.g., Foertsch, Moses, Strikwerda, & Litzkow, 2002). Others have postulated that students dislike traditional classes because they are unsatisfied with the absorption of content through at-home texts (e.g., Peterson, 2016). However, the current findings would call both interpretations into question. Perhaps the problem with both the traditional classroom and the video-focused, flipped classroom is not the presence or absence of textbooks or lectures, but the expectation that today's diverse student population should be successful when asked to absorb or apply content in a single way. Given the wide range of learning strengths and weaknesses present in our classrooms, it is not surprising to discover that a one-size-fits-all approach might be ineffective. Therefore, instructors in flipped classrooms might consider adding choices, both in terms of pre-class and in-class activities, for the purpose of maximizing student engagement in their courses.

An additional implication of our findings concerns the assumptions that students bring into the classroom. Although the hypothetical instructors in these studies were equated in every way except course design, students made many assumptions about their personal characteristics. Participants made these unwarranted assumptions, despite constant reminders throughout the survey that, "The only difference between the two professors is the way in which each individual structures the course." Interestingly, these assumptions did not favor one instructor over the other. That is, if a student rated a given instructor as preferred, regardless of whether the instructor was utilizing a traditional or flipped design, that student was more likely to assume that the instructor was helpful, approachable, or "really cares about learning." Students also made judgments in their open-ended responses about the relative levels of competition and collaboration in the classrooms, the rigor of the grading, and the academic press of the courses, despite receiving no information regarding these constructs. At times, the assumptions made by participants were quite surprising and in contrast with expectations, such as the student who remarked, "Professors who try to make students learn on their own outside of class make me feel like they really don't care about their students. They try to use group projects as a way to get out of actually teaching." In short, students make many unwarranted assumptions regarding instructor and course quality on the basis of relatively small amounts of information, assumptions that they may carry with them into our classrooms that may interfere with the potential for learning.

A final implication of the current work concerns the finding across both studies and class preferences that participants believed they would learn more in their preferred class. In fact, the most common theme from

responses to the open-ended question, "Why did you select the instructor that you did?" was that participants felt they would learn more in the preferred classroom environment. This begs the question, however: what do students mean when they say, "learn more?" One interpretation is that students are accurate assessors of their individual learning needs. Perhaps students who prefer a traditional classroom environment recognize that they have the exemplary executive functioning, attention, working memory, and organization skills necessary to absorb relevant content from an in-class lecture and that they are effective at elaborating on, and applying, this absorbed content in their own time. Although academic success is positively coordinated with metacognitive awareness, college students, in general, are largely ineffective when it comes to accurately assessing personal learning needs (Young & Fry, 2012).

A contrasting interpretation is that diverse definitions of the construct of *learning* exist among the students we teach (Entwisle, McCune, & Hounsell, 2002). As was evident in the open-ended responses, some students equate learning with success on course exams. For example, consider the student who remarked, "I get the information. I study the information. I take a test. Seems simple." Given that many of today's college students experienced a public K-12 learning environment characterized by high stakes testing and accountability programs, it should not be surprising that many students equate learning with reproduction of class content on standardized tests. In contrast, other students view hands-on, application-focused activities as the gateway to true learning. Given broad support for the efficacy of active learning strategies in encouraging the long-term retention and application of class content (see Prince, 2004, for a review), it seems that this second operationalization of learning is the one we should promote in our classes. We must remember, however, that between a third and a half of our students do not interpret the construct of learning in this way. Therefore, if our true aim is to improve learning via the application of principles from the flipped classroom, we must be prepared to educate our students about this second interpretation of the construct. Although the inaccurate assumptions students bring to our classrooms are rarely their fault, they are nonetheless present and serve as barriers to the learning process. Therefore, if we design our flipped classrooms to focus on providing varied options for the out-of-class absorption of content and for the in-class application of such content, it is possible that we could successfully scaffold our students towards embracing a deeper conceptualization of the construct of learning.

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Appendix A
Personal and Pedagogical Characteristics of the Instructors

1. How interesting do you think this class would be?
2. How fun do you think this class would be?
3. How useful do you think the material/skills you would learn in this class are?
4. How well do you think you would learn the material in this class?
5. In terms of a grade, how well do you think you would do in this class?
6. How likely would you be to engage in non-academic activities during class time?
7. How approachable do you think this professor is?

Listening to Undergraduate Peer Tutors: Roles, Relationships, and Challenges

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Peer tutoring in undergraduate education can provide many benefits to students and instructors. However, the roles and responsibilities of peer tutors can be complex and varied, even within a single program. In particular, navigating between students and faculty can challenge peer tutors' sense of purpose and role clarity. In order to bring the voices of peer tutors themselves into the scholarly conversation about peer tutoring in higher education, this article provides a case study of a peer tutoring program at a small, private, primarily undergraduate institution. We find that professor-student relationships, role clarity and expectations, and tutor positionality are significant themes in peer tutors' understanding of, and satisfaction with, their tutoring experiences.

Peer tutoring has grown increasingly common as a support structure in higher education, relying on the knowledge and wisdom of students to supplement faculty teaching. Numerous studies have shown the benefits of peer tutoring for students through a range of tutoring practices and roles. Far fewer have asked tutors directly about their experiences. Tutors must inhabit a position between students and faculty, navigating relationships complicated by different levels of power and authority. In surveying and interviewing peer tutors, we hoped to better understand the complexity of these roles and relationships by listening to the voices of the peer tutors themselves. To situate those voices, we first examine the current trends in tutoring in higher education, then use survey data and interviews with peer tutors at Trinity University in San Antonio, TX, USA as a case study, focusing on tutors' understanding of their roles and the accompanying challenges and benefits. We conclude with recommendations for other peer tutor programs based on our findings.

Literature Review

Peer Tutor Programs

Much of what is now called "peer tutoring" or "peer mentoring" emerges from the literature and practice of Supplemental Instruction (SI). SI's emergence in the 1970s offered an alternative vision of tutoring, shifting it from assistance for at-risk students to additional support for all students (Zaritsky, 1994). The latter approach is now common in many university peer tutoring programs today, though of course remedial tutoring programs also exist. Given the varieties of peer tutoring programs, Falchikov's (2001) comprehensive review of peer tutoring provides a helpful schema of the types typically seen in higher education: 1) peer tutors in the same class and level as students tutored; 2) peer tutors in the same class as students tutored but given a special status by the course instructor; 3) students tutoring other students in the same institution, but at a different level or grade; and 4) students

tutoring students at different levels and from different institutions (p. 9). For the purposes of our research, we focused most on literature describing models closest to our own: students tutoring other students in the same institution but at a different level or grade.

Benefits of Peer Tutors

Many studies about peer tutoring are case studies that present program results, typically focused on the impact of tutoring on students tutored. Frequently noted benefits include improved academic performance (Colver & Fry, 2016; Comfort & McMahon, 2014; Ochse, 1995; Topping, 1996; Topping & Watson, 1996) and greater satisfaction with the college experience (Evans, Flower, & Holton, 2001; Falchikov, 2001; Gordon, Henry, & Dempster, 2013). Peer tutoring has also been shown to deepen tutors' own academic learning (Galbraith & Winterbottom, 2011; Wilson & Arendale, 2011) and develop their identities as leaders and teachers (Alsup, Conard-Salvo, & Peters, 2008; Clouder, Davies, Sams, & McFarland, 2012; Murray, 2015).

Student perceptions of tutors offer a less-explored perspective. Colvin and Ashman (2010) use a grounded theory approach to describe how student perceptions of peer tutors can extend beyond stated program objectives. In Colvin and Ashman's study, students viewed peer tutors as a "connecting link" to the campus and academic environment, in addition to roles as peer leader, learning coach, student advocate, and trusted friend (p. 126). Colvin and Ashman also discuss the benefit of tutors to instructors based on tutor feedback on the course, which others have shown can lead to changes in teaching practice (Gordon et al., 2013).

In addition to examining their impact on students and instructors, tutors are also part of a larger institutional context. Tutors' roles may include acclimating students to institutional values or alleviating faculty workload (Christie, 2014; Owen, 2011). A few studies also allude to the perception of tutors as cost-saving measures for the institution (Gordon et al., 2013; Murray 2015; Smith,

2008), though none have analyzed whether this is actually a cost-saving approach.

Peer Tutor Challenges

Peer tutors face a range of challenges, some of which stem from inadequate preparation. Peer tutor preparation varies widely, ranging from one-time orientation sessions (Hodgson, Brack, & Benson, 2014) to prerequisite courses (Alsup et al., 2008), to concurrent enrollment in practicum-style courses (Gordon et al., 2013; Smith, 2008) or courses that offer instruction in pedagogy and learning theory (Colvin & Ashman, 2010). Programs in which tutors are working with a particular class of students may also involve regular meetings between the tutor and course instructor (Gordon et al., 2013; Murray 2015) or meetings between tutors and tutoring program advisors/coordinators (Christie, 2014; Hilsdon, 2014). In cases in which preparation consists of a one-time meeting, tutors may feel underprepared in terms of skills and content knowledge to succeed in their tutoring responsibilities (Falchikov, 2001; Topping & Watson, 1996). While many tutoring programs require that the tutors have previously taken the course for which they will now serve as tutors, some tutors also described the challenge of finding time to refresh their knowledge of the course material (Alsup et al., 2008; Evans et al., 2001).

Role clarity is also a significant challenge for peer tutors (Colvin, 2007; Wilson & Arendale 2011). This is an area where peer tutor voices are most visible in the literature. For example, when instructor expectations are unclear, peer tutors describe feeling unappreciated or vulnerable, sometimes taking on extra obligations that can leave them overworked and feeling guilty (Christie, 2014; Owen, 2011). In mitigating these challenges, Smith (2008) highlights the important responsibility of the instructor in clarifying and promoting the tutor's role. Students may also be confused about tutors' roles (Colvin 2007), turning to them for advice on non-course-related matters such as time management and adjusting to college, whether or not these are part of tutors' formal responsibilities. In these situations, it can also be difficult for tutors to maintain boundaries between formal tutoring and personal advice (Christie, 2014). While some tutors may enjoy the informal side of tutoring, others may find it difficult to establish and maintain personal boundaries, which can lead to burnout and overwork (Christie, 2014; Owen, 2011).

Developing the student-tutor relationship requires vulnerability from both parties, which is another challenge. While the student may experience what Christie (2014) calls "asymmetry of dependent trust" (p. 962), since the student is much more dependent on the tutor for

knowledge and academic success, the tutoring role is not without discomfort as well. Tutors also experience feelings of vulnerability, especially when students reject their help (Colvin 2007, Colvin & Ashman, 2010; Owen, 2011). Students may distrust peer knowledge due to pre-existing beliefs about traditional sources of expertise, i.e., that knowledge should be transferred from professor to student (Colvin & Ashman, 2010; Evans et al., 2001; Owen, 2011), thus tutors may struggle to demonstrate their credibility (Colvin, 2007).

While forming relationships can be a benefit of tutoring (e.g., Colvin & Ashman, 2010; Gordon et al., 2013; Hilsdon, 2014; Topping & Watson, 1996;), relationships between tutors, students, and instructors are themselves challenging and complicated by different levels of power and authority. Some studies concluded that the tutor-student relationship should be as symmetrical as possible (Hilsdon, 2014; Zaritsky, 1994), while others saw benefits in a more hierarchical relationship (Christie, 2014; Colvin & Ashman, 2010). Encouraging students' trust in peer tutors in spite of this hierarchy can be a challenge for both students and tutors (Colvin, 2007; Colvin & Ashman, 2010; Evans et al., 2001; Falchikov, 2001; Owen, 2011). However, few of these studies examined hierarchy from the tutors' perspective. In one exception, tutors and students alike were concerned about potential abuse of tutor power, though the study did not find any actual incidents of such abuse. It did find that tutors invest in relationships with students and may have difficulty letting go at the end of the course or tutoring session (Colvin & Ashman, 2010).

While tutors can provide a number of benefits to students, instructors, and institutions, as well as benefit themselves, the relational nature of tutoring creates challenges, especially around role clarity. Though it is beyond the scope of this paper, more research on student perceptions of peer knowledge, faculty perceptions of peer tutor work, and peer tutor feedback processes is needed in order to fully illuminate peer tutor experiences and potential. It is also helpful to listen to peer tutors themselves as they describe the rewards and challenges of their position, as we will do here.

Institutional Context

While much of the literature on peer tutoring examines programs at large and/or public universities, few studies examine tutoring programs at smaller institutions. Our case study takes place at Trinity University, a private, selective, residential university in San Antonio, Texas, USA with roughly 2300 undergraduates and 200 graduate students. The undergraduate curriculum offers a mix of liberal arts and pre-professional coursework. In 2014, the faculty approved a new curriculum that added several components, including a required course to be taken in

a student's first fall semester called the First Year Experience (FYE), which was modeled on a previous first-year course structure that also incorporated peer tutors. Two instructors teach one FYE course, which meets five days a week (alternating instructors) and develops students' skills in the following areas: discussion and reasoning, oral and visual presentations, analytical and argumentative writing, and locating and evaluating information. Each course is part of a larger cluster on the same topic, and each course has at least one peer tutor, if not two (one for each instructor). Fall 2015 marked the first implementation of Trinity University's FYE program, and research for the case study to follow was conducted immediately afterward, in Spring 2016.

While the focus of this article is on peer tutor experiences, it is important to note that there is a wide range of experiences among instructors in terms of familiarity with first-year student instruction and working with a peer tutor, ranging from decades of experience to none. In addition, in the Fall 2015 semester, few peer tutors had actually taken the class they peer tutored for, since that semester marked the first implementation of the new FYE program; the exceptions were a handful of tutors who had participated in the course on which the FYE was modelled. Tutors earned three credits (a standard course amount) for one semester of peer tutoring.

Method

We began this research hoping to better understand the experiences of peer tutors in Trinity's FYE using a case study approach, in which we present "a detailed description of the setting or individuals, followed by an analysis of the data for themes or issues" (Creswell, 2014, p. 196). Of the three of us, Sophia Abbot approached the project from her position as Fellow for Collaborative Programs (a faculty development position focused on student-faculty collaboration). Anne Jumonville Graf's interest in this topic emerged from her position as First-Year Experience Librarian, interacting with multiple FYE instructors and peer tutors, as well as her own questions about how to effectively use a peer tutor herself as an FYE instructor. Beverly Chatfield, 2017 Trinity University graduate, had peer tutored in the FYE program and was interested in studying and enhancing peer tutoring efforts at the university.

For our case study we developed an IRB-approved convergent parallel mixed methods approach (Creswell, 2014), collecting both qualitative and quantitative data in order to get a broad sense of the lived experiences of peer tutors. First, we developed and administered an anonymous online Qualtrics survey (Appendix 1) sent via email to all Fall 2015 FYE peer tutors. Of the 76 peer tutors who received the survey, 49 completed it, for a robust response

rate of 64.5%. The survey included multiple choice and free-text questions on a broad range of topics: time spent tutoring, roles and responsibilities performed, tutor motivations and benefits, level of coordination with course instructor, perceived level of support and guidance, and general satisfaction with the experience.

To enhance and expand our survey results, the survey included a link for voluntary follow-up through focus groups and email interviews. Fifteen tutors volunteered to participate in these opportunities and ultimately six tutors participated in a focus group (focus group questions can be found in Appendix 2). We designed the format and questions for our focus group using Krueger and Casey's (2000) *Focus Groups: A Practical Guide for Applied Research*. We hoped that these more in-depth and individual responses would help us understand both the varieties and commonalities of peer tutor experiences. In addition, we recognized being able to compare qualitative and quantitative data would allow us to look for contradictions, inconsistencies, and differences (Creswell, 2014, p. 222) in our data and triangulate our data sources (Creswell, 2014, p. 201). While we had planned for this follow-up to be a series of one-time focus groups with a range of participants, scheduling conflicts prevented many willing students from attending. Additional qualitative data sources, such as email correspondence with peer tutors, were included as well to incorporate the written reflections of four peer tutors who were unable to attend a focus group (email questions can be found in Appendix 3). The focus group and email responses make up the qualitative portion of our data along with the open-ended responses from the survey, though we acknowledge the smaller number of focus group participants and email respondents limits our ability to generalize from those sources.

Once we had the complete survey responses, transcription of the focus group and accompanying notes, and copies of email correspondence, we examined our data. To start, Anne and Sophia each hand-coded the complete data at the sentence level to identify themes and categories of themes. Beverly then reviewed the full data and codes as a form of member checking (Creswell, 2014, p. 201). For the most part, our coding of themes was well-aligned, but we discussed as a group any discrepancies we noticed between coding in order to come to a consensus. Following this process and a review of peer tutor literature, we developed a shared set of codes and each re-coded our data using this codebook. Our list of shared codes is as follows:

- Tutoring responsibilities (formal and informal)
- Learning about FY students
- Observations about faculty-student relationships
- Peer tutor relationship to professor
- Positionality (power, course/ program insights from tutor position)
- Tutor role clarity / guidance / expectations (communication with professor)

Table 1
Primary tutor roles

	Number	Percent
Helping students find sources	15	31%
Editing or commenting on student writing	46	94%
Helping students prepare presentations	11	22%
Facilitating or participating in class discussions	42	86%
Hosting review sessions	10	20%
Helping students understand course readings	25	51%
Managing classroom housekeeping (e.g. taking attendance, returning papers)	36	73%
Other	11	22%

Our last step was to select a set of themes to analyze for this article; after consulting gaps and existing discussions in the literature, we narrowed our scope for this article even further to explore three themes in greater detail:

- The professor-student relationship
- Tutor role clarity and expectations
- Tutor positionality

Results

At least one tutor from each FYE group offered in Fall 2015 participated in the survey, for a total of 49 completed responses. Thirty-one percent of tutors were sophomores, 43% juniors, and 27% seniors. Half were majoring in a humanities discipline, 16% in a social science, 22% in a STEM field, and 12% in a pre-professional field. We did not collect demographic information from our focus group or email respondents because they had already provided this information as survey respondents. As an analysis about the results of each FYE group would likely be of most interest to individual FYE instructors at Trinity, we have focused our results and analysis here on shared peer tutor characteristics and experiences, though, of course, different FYE methods and instructors influence those experiences.

Almost half of the tutors surveyed (48%) had never tutored before serving as an FYE tutor. Twenty-eight percent had tutored previously, but not at Trinity. Some (20%) spent upwards of 8 hours per week on tutoring responsibilities outside of class time, and a few (16%) spent as little as one to two hours per week. However, the majority (64%) of tutors spent an average of three to five hours per week on tutoring.

The range in specific tutor roles was quite varied (Table 1). The most common role for tutors across FYEs was editing or commenting on student writing (94%), followed by facilitation or participation in class discussions (86%). Least common were tutors who led review sessions on the course content (20%). The survey question for tutor roles allowed for multiple

selections, as tutors usually performed multiple tasks in their roles, hence the percentages will exceed 100.

Despite the variety of specific tasks, we observed several themes regarding tutors' personal experiences of their role as reflected in free-text survey responses and underscored by focus group data and email reflections. The three main themes we explore here are (1) the professor-tutor relationship, (2) role clarity and expectations, and (3) tutor positionality.

Theme 1: The Professor-Tutor Relationship

Tutors' relationships to the professor played a significant role in their tutoring experience. More than half (65%) of the tutors said the opportunity to work with a particular professor was the most important reason for their participating in the FYE program as a peer tutor. Tutors believed that the professor played a large role in whether students used the peer tutor outside of class, which seemed to be a major criterion by which tutors evaluated their own success. In seven instances – four in the survey, two in email reflections, and one in the focus group – tutors stated that professors should mandate or strongly encourage students go to tutor office hours. One tutor reflected through email on the impact of the professor's legitimization of her role, writing that "[the professor's] constant referral to/calling on my knowledge and experience in class...really allow[ed] me to help in class to my full capacity...I felt that the students respected me more outside of class."

Tutors appreciated when the professor gave them a chance to lead the class. In one email reflection and one survey comment, two tutors described the opportunity to lead a class discussion as a valuable opportunity to gain responsibility. While this particular responsibility did not seem to be widespread, tutors saw their relationship with the instructor as one that required earning the instructor's trust, i.e., "We appreciate the trust you [instructors] vest in us." As another tutor explained in the survey, a close working relationship was integral to success:

That is one of the biggest things that I felt contributed to my own role in my section's success: that the instructor and I were on the same page. We met weekly to discuss student progress and lesson plans, and I felt that the instructor trusted me, which was critical to our success.

Theme 2: Expectations and Role Clarity

If mutual trust and the professor's validation of the tutor to students contributed to positive experiences for peer tutors, so did a clear understanding of the professor's expectations. In fact, the two themes (professor-tutor relationship and role clarity/expectations) were closely connected in tutor comments. In written responses to the survey question, "What would you like future FYE instructors to know about working with their tutors?," 49% of tutors strongly recommended professors regularly and clearly communicate their expectations across a range of tutor responsibilities. As one survey respondent suggested,

It's helpful to meet regularly with your peer tutor and to give them firm directions early on about things like: their role during class, whether they should attend every class and lecture, whether they should access and assess everyone's homework... and to what extent they should be assessing the work, and so on.

Importantly, it is possible this response comes from tutors' experience of receiving such guidance and should not be taken to mean that in this case professors did not communicate with their tutors. Still, given the strong preference for clear expectations and regular communication, it seems likely that both tutors who received such communication, as well as those who did not, advocated for its importance in responding to our survey.

In continuing to examine the theme of expectations and role clarity, we noted a divergence between the quantitative and qualitative data when examining role clarity and tutor expectations. Survey responses show 76% of tutors agreed or strongly agreed that "peer tutoring was what I expected it to be," yet in the free-text response following this question, almost a third (31%) of that 76% *also* wrote about feeling unclear about particular aspects of their role. The nature of the role confusion varied. Five of these tutors (11% of survey respondents) said they were surprised by the time commitment tutoring required. Six (12%) of these tutors expected first-year students to be more interested in engaging with the tutor.

We also examined the relationship between tutors' role expectations and frequency of meetings between tutors and instructors (Table 2). While six students were neutral about whether the role met expectations and four disagreed that it did, when broken out by meeting frequency, the data were too small to analyze. However,

looking at tutors who felt the role *did* meet expectations revealed interesting results. The desire for additional support was noticeable even among tutors who felt the role met their expectations and met frequently with their instructors throughout the semester.

The eight tutors who met often with their instructors, agreed that the role was as expected, and they also commented that they could have used additional support or guidance on their responsibilities and mentioned a variety of support needs. Suggestions ranged from wanting a better understanding of their overall role to desiring guidance on more specific tasks, such as how to provide feedback on students' writing assignments. On the other end of the spectrum, of the 14 tutors who seldom met with their instructors (1-3 times a semester), the majority (eight) still agreed that "being a peer tutor was what I expected it to be," though six of those eight wanted more support. Finally, six of the 13 tutors who met sometimes (4-6 times) and agreed the role was as expected also described areas in which they could have used additional guidance. While it is difficult to know how accurately tutors reflected on their initial expectations for the role after having been in it for a semester, it is interesting to see that regardless of how frequently they met with the instructor, many still wanted additional support and guidance.

Tutors wanted additional guidance and support in areas that were also the major areas of responsibility, as seen in Table 3. The free text survey responses and focus group data help illuminate the connection between tutors' primary roles and desire for more support and guidance: "I wasn't entirely sure of the nature of the added suggestions [to student writing]. Over time it got refined, but in the beginning it was rocky." For this tutor and others, lack of clarity around writing feedback did not prevent them from performing the task of commenting on student work, despite feeling unsure about what kind of feedback to provide. This tutor's comment also suggests that initially challenging roles became less so over time, suggesting perhaps the need for greater guidance early on.

In dealing with another role, facilitating class discussions, one tutor wrote in a free-text survey response,

I was never sure how much I should stay quiet and let the class talk. Sometimes my professor would ask a question that I knew the answer to but I felt like I should let the class try to figure it out themselves rather than me give it to them.

This feeling about class discussions appeared in four other responses to the survey (10% total), and came up once in the focus group, suggesting it may be a more widespread feeling for tutors who are newly inhabiting an in-between space between student and professor.

Table 2
Relationship Between Frequency of Meetings, Tutor Expectations, and Desired Additional Support

Column 1	Column 2	Column 3
Number of tutors who meet with instructors...	Number from column 1 who agreed or strongly agreed tutoring met expectation	Number from column 2 who wanted additional support
Seldom (1-3 times): 14	8	6
Sometimes (4-6 times): 13	11	6
Often (7+ times): 22	16	8

Table 3
Areas of Primary Responsibility and Desire for Additional Support

Tutor responsibilities	Primary Role?	Total who wanted more support/guidance?
Helping students find sources	31%	12%
Editing or commenting on student writing	94%	41%
Helping students prepare presentations	23%	16%
Facilitating or participating in class discussions	86%	27%
Hosting review sessions	20%	11%
Helping students understand course readings	50%	20%
Managing classroom housekeeping (e.g. taking attendance, returning papers)	73%	9%
Other	22%	9%
None	N/A	27%

However, given the limited number of responses, more investigation among a larger sample would be necessary to generalize to our entire peer tutor population or other tutors.

The new format of the FYE course itself also contributed to the desire for additional guidance. One tutor wanted guidelines for “helping students understand the purpose and format of the course,” and they explained, “Many students seemed confused and overwhelmed by the magnitude and format of the course.” When asked later in the survey about what tutors would like faculty to know about working with tutors, six tutors in the survey suggested that better understanding the overall course design and purpose would enhance the clarity of their roles. One wrote explicitly that understanding the behind-the-scenes aspects of the course helped with the tutor’s success: “I really enjoyed being able to sit in on the weekly meetings that our professors had. It really helped me know what to communicate to the students and I was even able to give input for the lesson plans.” Another tutor, who did not have this same experience of regular meetings about the course content and plans, wrote in the survey, “Sometimes I felt like I wouldn’t know entirely what the overall goal of the semester was, which led to students wondering what the overall goal of the class was.” Until we can repeat the survey, it is difficult to know how much of this is related to the newness of the course format—new not only to tutors

but also instructors—and how much was part of experiencing the classroom from a different perspective. A follow-up study would help clarify these issues and allow us to further explore the impact of tutors’ previous experience on their tutoring role, especially the need for further support and guidance.

Theme 3: Tutor Positionality

Tutors navigate an in-between space in working with both students and instructors. Two tutors in the focus group described their role as “a good liaison,” and, “the person everyone was supposed to go talk to.” One of these tutors explained:

I didn’t realize how big the disconnect between the professor and the freshman students can be. I remember being afraid of my professor but I didn’t realize how much... Sometimes it helps if I put it in student-speak instead of professor-speak.

The in-between positionality of the tutor helped her to act as a translator between the professor and the students. A tutor who sent us an email reflection echoed this and explained her role as a kind of intermediary between her peers and the professor who could not only improve student-professor relationships, but also support students’ development of interpersonal skills. She wrote: “If I am approachable, the professor is more approachable, and it

becomes easy to not only help kids succeed, but also teach them to not be afraid of their superiors, and to have confidence and people skills.” This tutor felt her “approachability” directly impacted the professor’s. However, another tutor in the focus group described a different dynamic: it was the *difference* between the tutor’s and instructor’s approachability that was beneficial. Students felt comfortable talking about the class with him in ways they did not feel comfortable communicating directly to the instructor. His in-between position allowed him to convey the students’ concerns to the instructor, who fortunately took them seriously and responded. Because we did not collect data from the first-year students enrolled in the FYEs, it is unclear to us how much impact the approachability of the peer tutors had on the course more broadly, but it does seem that these tutors enhanced the level of communication between first-year students and the faculty.

Of course, this responsibility to students and navigation between professors and students also presented challenges. Sometimes tutors identified the challenge as a desire to be viewed by the professor as being on a different or higher level than the students in the class. One tutor wrote in the survey: “It’s a waste of our time being middlemen between the teacher and the students without having a real role in the class.” One tutor in the focus group described feeling “like [another] student in the class.” Another tutor in the focus group said, “I felt like my role got lost sometimes,” and explained, saying the following:

If I have to do all the readings and have the same level of knowledge as [the students] do, and go to class like they do, what is the difference [between me and the students], besides that I’m not getting a grade for it...? Having more defined roles, definitely super important.

Because most of these responses came out of our smaller focus group, we do not know how representative these sentiments were for other tutors, but they are worth noting because of their strong potential to negatively affect tutors’ experiences.

Tutors wanted students, not just professors, to see them as inhabiting a different role than the students in the class. One tutor in our focus group explained:

I think being a peer tutor was really hard to, first of all, not get annoyed by some of [the students], because they’re not that far away... Your role of being two or three years older than the first years was really important. They didn’t really respect me initially...but there was a certain amount of experience where you could give advice and stuff.

While this tutor initially struggled to be viewed as someone worth listening to because of his proximity to

students, he also discussed building more of a rapport with the students as the semester progressed. Indeed, many tutors in our survey took care to differentiate themselves from students. We found six instances of tutors referring to the students they worked with as “kids” in their survey comments and four more survey comments explicitly labelling the students “first years” or “freshmen,” implying a sense of distance and advanced experience in spite of their proximity to the students in age.

Navigating between students and professors is a challenging aspect of tutoring. Yet in general, tutors seemed to appreciate being able to take on this intermediary role. We noted earlier that many tutors were interested in tutoring for the chance to work with a particular professor; however, many ended up most appreciative of their experiences with the students. In fact, when asked in the survey about the most rewarding aspect of tutoring, 83% of tutors said it was the opportunity to work with students. As one tutor surveyed said, “I was really pleased that [the students and I] developed a repore [sic] and were able to question each other’s thoughts, not just me challenging them... it helped them to learn to question things.” A tutor in our focus group expanded on how this relationship went beyond academic assistance:

The most rewarding part is that relationship that you get with [the students]. Not only was it just paper writing, but the first few weeks it was the transition to college. We would talk about not just [the FYE], we’d talk about classes, registration ... the stresses of being away from home for the first time. It was really good. It felt good to be there.

This tutor and others highlighted the social role they played in helping students transition to college, having conversations not only within the boundaries of the course content or specific course skills, but also extending to more holistic student support. This ability and their knowledge of college life put tutors in a relative position of power in spite of their “peer” status. Tutors clearly appreciated the opportunity to positively influence newer students: despite the challenges, 91% of tutors surveyed agreed or strongly agreed that their tutoring experience was a positive one.

Discussion

Our peer tutors perceived themselves not only to be writing coaches and class discussants, but also liaisons, intermediaries, and connectors, linking the world of professor and student. These results confirm Colvin and Ashman’s (2010) analysis of peer assistants as a “connecting link” to the campus and academic environment, peer leader, learning coach, student advocate, and trusted friend. In fact, Colvin (2007)

recommends that “...those involved in training peer tutors should stress the liminality or ‘in-betweenness’ of the position ... [Peer tutors] can also be a bridge between instructors and students, with characteristics of both and yet neither fully student nor fully instructor” (p. 178). To this we might add that those training peer tutors also acknowledge the challenge of this “in-betweenness,” as well as its positive aspects. In her analysis, Smith (2008) even highlights the importance of the words “mentor” and “tutor” in helping to clarify roles, noting that in her context peer mentor more effectively communicated the desired role to students in the course (p. 61). Regardless of the language chosen, our study suggests that liaison or “connector” positions may be at particular risk for role ambiguity and require additional work in clarifying expectations.

In listening to our tutors, it appears that a lack of role clarity led to frustration or confusion for them and for students. These results echoed a number of findings from other peer tutoring studies. Most significantly, they highlight the importance, but also complexity, of peer tutor role clarity. Colvin and Ashman (2010) also noted in their study that “clarification of instructor and student roles, particularly in a first-year experience class, would...be helpful” (p. 132). Trinity University peer tutors expressed appreciation for clear expectations where they existed and the desire for such guidance where it did not. Yet it also seems that the types of roles inhabited by peer tutors could make setting expectations a more complex and involved process than it may initially appear. While tutors expressed the most anxiety about specific peer tutor tasks, such as providing feedback on student writing or contributing to class discussions, they also expressed a desire for clarity about the nature of their positions and identity as peer tutors. Our results also imply that peer tutors learn what it means to be a peer tutor through practice and experience, which suggests that expectations and role clarity may need to be addressed in multiple and evolving ways throughout a peer tutor’s tenure with an instructor and class.

In addition to the complexity of setting clear expectations, our analysis echoed Colvin and Ashman’s (2010) findings that “issues of power...were not blatant but rather couched in terms of mentors feeling powerful because they were helping students succeed rather than because they felt the role itself was imbued with inherent power” (p. 132). Trinity University tutors expressed a strong desire to help students and drew power from that position, but not until the professor had given them that power by clarifying the role of the peer tutor for *students* as well. One peer tutor’s desire for expectations from the professor—“[J]ust tell us what you want us to do!”—also illuminates the degree to which peer tutors did not experience the position of the peer tutor as automatically meaningful or powerful without the professor’s trust and support.

For our peer tutors, the instructor’s role in setting expectations mattered enormously not only for the peer tutor but also in helping students understand how to utilize the peer tutor, a finding echoed by Smith (2008) and Colvin (2007). Our peer tutors expressed their sense of the importance of the instructor’s role using the language of trust: they were aware that the peer tutor position involved the professor entrusting them with responsibilities. Their experiences also suggested that the trust displayed by the professor in giving them responsibilities influenced the trust of the students in the peer tutor. Furthermore, a professor’s acknowledgement of the tutor’s abilities and importance in the classroom setting was crucial to a good student-peer tutor relationship. Thus, our findings enhance Smith’s (2008) and Colvin’s (2007) findings on the significance of clear expectations by clarifying where those expectations need to be set: not only between peer tutor and professor, but publicly in the classroom.

A review of even just a few peer tutor programs reveals the significance of different institutional contexts on opportunities for peer tutor support. Some programs are heavily formalized, such as the Undergraduate Teaching Assistant (UTA) program at Virginia Commonwealth University. As described by Murray (2015), the UTA program serves as a teaching practicum, service learning experience, and leadership seminar; it thus has a host of accompanying outcomes and learning objectives. At the moment, Trinity’s FYE peer tutors do not have shared learning objectives; those are determined, if at all, by each professor in an atmosphere that prizes faculty autonomy, especially in the classroom. It will be interesting to observe, going forward, how a culture of individual faculty autonomy functions within the FYE structure, which not only pairs faculty together to teach an FYE course but also groups faculty into FYE clusters, some of which share syllabi and assignments completely while other clusters organize themselves more loosely. Such a structure may make it difficult to implement the recommendation of Wilson and Arendale (2011):

[P]eer educators benefit when they receive training and education that seeks to develop their understanding in both the content and process of the services they will be providing. *They should have multiple avenues for professional development and be closely supervised by professional staff who can help the peer to understand the boundaries of their roles*” (p. 49, italics added).

Not only do smaller schools like Trinity not have “professional staff” who supervise PTs outside of the instructor, but also they may not have either the

resources or the interest for developing more formal tutoring programs.

Wilson and Arendale's recommendations also highlight a discrepancy in the literature on supervising and training peer tutors: do peer tutors "save" instructor time (Gordon et al., 2013) or require more of it (Owen, 2011)? Although we did not survey instructors at our institution to see if they also had the impression peer tutors "save time," we were able to look at how often students reported meeting with instructors outside of class as a rough measure of instructor time. As we found, while students were more likely to report that peer tutoring met their expectations of the role if they met more often with the professor, many still expressed a desire for additional support and guidance whether they met frequently or less often. We suggest that one reason for this may be that the peer tutor experience is one of continual learning, much like the learning environment of the semester-long classroom. After all, few professors would expect students to receive instruction a few times at the beginning of the semester, disappear for weeks, and then be able to demonstrate their new skills and knowledge perfectly without additional support. Yet this is the model of many peer tutor programs with a one-day orientation structure. As we saw, even tutors who understood what was expected of them described areas in which they would have liked additional support as they gained experience in their tutoring responsibilities. Whether this comes in the form of additional meetings with the instructor or additional workshops/training sessions, we cannot say from our data, but one thing is clear: working with a peer tutor requires a significant amount of time and should be treated as an ongoing learning experience, as our tutors' accounts of learning throughout the semester suggest.

We acknowledge that the students responding to our survey were self-selecting, and those who volunteered to participate in a focus group or respond to us via email were even more self-selecting. This may mean that we heard from students who were especially likely to take their responsibilities as peer tutors seriously (i.e., likely to want additional support), and/or feel dissatisfied by their experiences. Variations in how different instructors used and related to peer tutors are also significant and worth additional investigation, as is the variable of peer tutor age and previous experience. Nonetheless, our strong survey response rate (64.5%) suggests that our results are a good start in listening to the experiences of Trinity University's FYE tutors. Also, while our study was explicitly intended to bring the voices of peer tutors themselves into the conversation about peer tutoring, faculty perspectives on working with peer tutors would also illuminate the issues substantially, especially in regard to issues of workload. Finally, additional research on how tutoring contributes to tutors' own learning would further

illuminate the lived reality of peer tutor experiences in higher education.

Recommendations

Despite the significance of institutional context in creating and sustaining a successful peer tutor program, we believe listening to the voices of peer tutors themselves can lead to insights with broad applications. Our research and review of existing peer tutor literature suggests the following take-aways for institutions of all types:

1. Peer tutors appreciate clear expectations in terms of both specific responsibilities and the meaning of being a tutor more broadly. Frequent and open communication between the tutor and the instructor, then, may help lend clarity and structure to the tutor role.
2. At the same time, role clarity is challenging for those in "in-between" positions: the unique positionality of being situated between faculty and students is both the opportunity and challenge of peer tutoring. Framing it as such, as well as giving tutors opportunity to reflect on the learning that emerges from this navigation may help tutors to accept some of the uncertainty and liminality of their position.
3. Additionally, instructors can and should help establish these roles, not only in conversation with peer tutors themselves, but publicly in the classroom setting, with and for students.
4. In addition to setting student expectations about peer tutor roles, instructors can legitimize those roles by speaking specifically about the peer tutors' knowledge and credibility. This affirms the tutor, both in one-on-one settings and in the classroom, thus building tutor trust with the students in the class.
5. Finally, tutors and instructors should recognize that working as a tutor is a learning process, and they should make ongoing support and guidance key to tutors' senses of success.

With these suggestions in mind, peer tutors can experience successful and purposeful relationships with students and instructors.

Conclusion

Ultimately, we find that tutors value the opportunity to work with professors and help students through an intermediary role, but especially so when all parties understand that role. When tutors, students, and professors have a better sense of what role tutors should play in and out of the classroom, tutors are better able to support students, enjoy the experience of tutoring, and

feel connected to the purpose of the course and work of the instructor. Instructors are not only key in deciding and communicating expectations to tutors, but in defining the tutor's role for students throughout the tutor's tenure. Thanks to their reflections, we now have a deeper understanding of the complexity of the tutoring role as experienced by peer tutors themselves.

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Appendix 1 Survey

Consent

This survey, which should take 5 to 10 minutes to complete, is part of research is being conducted by [First Author] in the [Center for Learning and Teaching] and [Second Author] in [Library] to better understand the experiences of FYE peer tutors. Neither faculty and staff (including those involved with the FYE) nor [First and Second Author] will be able to connect names or other identifiers to your responses. Your participation or non-participation in this survey will have no impact on your ability to work as a future FYE peer tutor. As an online participant in this research, there is always the risk of intrusion, however small, by outside agents (i.e., hacking) and, therefore the possibility of being identified exists. No absolute guarantees can be made regarding the confidentiality of electronic data. However, the data collected in this survey will be transmitted in encrypted format to provide additional safeguards against hacking. This helps ensure that any data intercepted during transmission cannot be decoded and that individual responses cannot be traced back to an individual respondent. Participation in this survey is entirely voluntary. You don't have to answer any questions you don't want to answer and you may discontinue participation at any time without penalty. By continuing this survey, you indicate that you have had any questions you wanted answered and agree to participate.

Background and Demographics

When is your expected graduation date?

- ☐ December 2015
- ☐ May 2016
- ☐ December 2016
- ☐ May 2017
- ☐ December 2017
- ☐ May 2018
- ☐ December 2018

The disciplinary area I most identify with is:

- ☐ Humanities (e.g. Philosophy, Spanish)
- ☐ Social Sciences (e.g. Political Science, Anthropology)
- ☐ STEM (e.g. Biology, Engineering)
- ☐ Pre-Professional (e.g. Business, Education)

Which FYE were you involved in? (You may select more than one if applicable)

- ☐ Arts and Ideas
- ☐ Being Young in Asia
- ☐ Creative Genius
- ☐ Food Matters
- ☐ Great Books of the Ancient World / HUMA
- ☐ Happiness
- ☐ Inventing Mexico
- ☐ Science Fiction
- ☐ Social Justice
- ☐ A Successful Life
- ☐ A Warming World / Climate Changed
- ☐ What We Know That Just Ain't So

Approximately how many hours per week did you spend working as an FYE tutor outside of FYE class time?

- ☐ 0-2 hrs
- ☐ 3-5 hrs
- ☐ 6-8 hrs
- ☐ 9+ hrs

Before serving as an FYE peer tutor, had you previously been a tutor at [University Name]?

- ☐ Yes
- ☐ No, but I tutored before attending [University Name]
- ☐ No, I had never tutored before this

Why did you opt to tutor for this particular FYE?

Tutoring Role

My primary roles as an FYE tutor were (select all that apply):

- ☐ helping students find sources
- ☐ editing or commenting on student writing
- ☐ helping students prepare presentations
- ☐ facilitating or participating in class discussions
- ☐ hosting review sessions
- ☐ helping students understand course readings
- ☐ managing classroom housekeeping (e.g. taking attendance, returning papers)
- ☐ other _____

In what (if any) aspects of your role did your FYE professor provide guidelines or support? (select all that apply)

- ☐ helping students find sources
- ☐ editing or commenting on student writing
- ☐ helping students prepare presentations
- ☐ facilitating or participating in class discussions
- ☐ hosting review sessions
- ☐ helping students understand course readings
- ☐ managing classroom housekeeping (e.g. taking attendance, returning papers)
- ☐ other _____
- ☐ none

In what (if any) aspects of your role would you have found more guidelines or support useful? (select all that apply)

- ☐ helping students find sources
- ☐ editing or commenting on student writing
- ☐ helping students prepare presentations
- ☐ facilitating or participating in class discussions
- ☐ hosting review sessions
- ☐ helping students understand course readings
- ☐ managing classroom housekeeping (e.g. taking attendance, returning papers)
- ☐ other _____
- ☐ none

Please explain your answer to the previous question.

My FYE professor asked for my input on (select all that apply):

- ☐ syllabus
- ☐ reading list
- ☐ assignments
- ☐ daily lesson plans
- ☐ discussion facilitation
- ☐ comments on students' assignments
- ☐ student well-being
- ☐ other _____
- ☐ none

If your FYE section had another tutor, how often did you collaborate with that tutor over the course of the semester?

- ☐ Never
- ☐ Seldom (1-3 times)
- ☐ Sometimes (4-6 times)
- ☐ Often (7+)
- ☐ N/A

Approximately how many times during the semester did you meet with the FYE professor outside of class?

- ☐ Never
- ☐ Seldom (1-3 times)
- ☐ Sometimes (4-6 times)
- ☐ Often (7+)

Learning and Tutoring

Over the course of the fall semester...

	Never	Seldom (1-3 times)	Sometimes (4-6 times)	Often (7+)
I reflected on the way I learn as a result of tutoring.				
I helped the FYE students reflect on their learning while tutoring.				
I talked to the FYE professor about my own learning.				
I talked to the FYE professor about the FYE students' learning.				

As a result of tutoring in the fall semester...

	Yes	No
My own writing improved.		
My own research skills improved.		
My own ability to facilitate discussion improved.		
My own confidence in the course content improved.		

Overall Reactions

The most rewarding part of my tutoring experience was:

Please indicate your level of agreement with the following statements:

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
I felt I contributed to the success of the FYE.					
My experience tutoring for the FYE was a positive one.					

If offered the opportunity, I would tutor for an FYE again (or would if on campus).

- ☐ Yes
☐ No

Overall, being a peer tutor was what I expected it to be.

- ☐ Strongly Agree
☐ Agree
☐ Neutral
☐ Disagree
☐ Strongly disagree

Please explain your response to the previous statement.

What would you like future FYE instructors to know about working with their tutors?

Appendix 2

Focus Group Questions

1. Welcome and thanks for participation
2. Our introductions
3. Overview of topic/reason for gathering:
 - a. As you know, we're here because we are interested in better understanding your peer tutor experiences, especially with the new FYE program. There are a wide variety of ways that peer tutors contribute and a variety of ways students and professors interact with their peer tutors, as we learned from the survey. We hope that better understanding peer tutor roles and experiences can help the FYE program in a number of ways, like ensuring that the PT experience is a positive one for future PTs, and to help FYE professors who may not have worked with a PT before have an idea of what to expect and how to use PTs.
 - b. Today, we are interested in finding out not just what worked well or didn't work, but gathering a more nuanced sense of what your experience was like. That means there are no right or wrong answers. We expect you might have differing points of view and hope that you'll speak up especially when your experience might differ from someone else's. Positive and negative responses are valuable.
 - c. During the session, [First Author] will be asking most of the questions and [Second Author] will be taking notes; we'll also be recording this so we don't miss any of your comments. No names will be included in our published findings.
 - d. During the conversation, feel free to respond to each other and look at one another; you don't need to just respond to [first and second Authors].
 - e. We really want to hear from all of you, though we recognize some people are chattier than others. If you end up talking a lot, we may ask you to hold off for a second to give someone else a chance, and if you haven't said much, we might ask you a question directly.
 - f. Finally, feel free to keep eating snacks, get up and go to the restroom if you need to, etc.
 - g. Ok? Let's begin by... (first question).

QUESTIONS, revised for 3/22/16

Opening Question

Make sure to have each person answer - something like,

1. "Tell us your name and what you enjoyed most about being a peer tutor."

Avoid info that emphasizes differences between people.

Introductory Questions (Think about connection to the topic)

2. "What did you learn about FY students through your PT experience?"
(or "What was it like working with FY students as a PT?")

Transition Questions

3. "What was the best thing your professor did to support you?"
4. "Think about when you had the most contact with your students...what kinds of assignments or class activities seem to facilitate the most interaction between you and the students?"

Key Questions (2-5)

6. "How did being a PT impact your own abilities in those areas?"
7. "Think back to the summer PT training...now that you've actually been a PT, what aspects of that training helped prepare you to help students? What other training might be beneficial?"
10. Many of you mentioned in the survey that your professor asked for your input on issues of student well-being; can you say more about what that entailed?

11. Are there things that could be done to encourage students to make better use of you as a resource? (IF TIME)

Ending Questions

11. What was your most successful moment as a tutor?

12. “What would make the peer tutor role even more enjoyable and satisfying?”

13. “Have we missed anything/is there anything we should have talked about that we didn’t?”

Notes on introduction and question structure drawn from *Focus Groups: A Practical Guide for Applied Research* (Krueger and Casey, 3rd ed.).

Appendix 3
Email Questions

1. What did you learn about FY students through your PT experience?
2. What was the best thing your professor did to support you in your role as PT?
3. Think about when you had the most contact with your students... what kinds of assignments or class activities seem to facilitate the most interaction between you and the students?
4. Think back to the summer PT training... now that you’ve actually been a PT, what aspects of that training helped prepare you to help students? What other training might be beneficial?
5. What would make the peer tutor role even more enjoyable and satisfying?

The Impact of Open Educational Resources on Various Student Success Metrics

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There are multiple indicators which suggest that completion, quality, and affordability are the three greatest challenges for higher education today in terms of students, student learning, and student success. Many colleges, universities, and state systems are seeking to adopt a portfolio of solutions that address these challenges. This article reports the results of a large-scale study (21,822 students) regarding the impact of course-level faculty adoption of Open Educational Resources (OER). Results indicate that OER adoption does much more than simply save students money and address student debt concerns. OER improve end-of-course grades and decrease DFW (D, F, and Withdrawal letter grades) rates for all students. They also improve course grades at greater rates and decrease DFW rates at greater rates for Pell recipient students, part-time students, and populations historically underserved by higher education. OER address affordability, completion, attainment gap concerns, and learning. These findings contribute to a broadening perception of the value of OERs and their relevance to the great challenges facing higher education today.

The Impact of Open Educational Resources on Student Success Metrics

The Association of American Colleges and Universities (AAC&U) performed a member survey of its 1,400-member institutions in 2017 to better understand the challenges facing colleges and universities today (AAC&U, 2018). In regard to students, student learning, and student success, among the greatest challenges were issues surrounding retention and completion, the quality and assessment of student learning, and the affordability of higher education. As you survey the higher education landscape and consider state and national initiatives with the widest presence, it comes as little surprise that these challenges are being voiced. As an example, with 39 states currently in their alliance, Complete College America exists to “significantly increase the number of students successfully completing college and achieving degrees... and close attainment gaps for traditionally underrepresented populations” (Complete College America, 2018). Their recommendations for higher education focus predominantly on how to keep students in college and accelerate their time to a degree. Furthermore, a key component of the larger completion agenda involves attainment gaps (AAC&U, 2015; Perna & Finney, 2014; Tinto, 2012).

The attainment gap refers to the rates at which different ethnicities earn college degrees. The U.S. Census Bureau tracks educational attainment, and in 2016, they reported that 37.3% of White Americans over the age of 24 had received a bachelor’s or higher degree. For African Americans in 2016 the attainment rate was 21.8%, and for Hispanic Americans the rate was 15.4% (National Center for Education Statistics, 2016). AAC&U encourages the use of equity-minded practices to enable higher education to better address attainment gaps. Among the recommendations they promote is

encouragement for institutions to disaggregate their student data to better understand disparities in student learning outcomes and degree attainment by considering socioeconomic status, as well as race and ethnicity (AAC&U, 2015; Gavin, Bolton, Fine, & Morse, 2018). In truth, the attainment gap has long been recognized, but as demographics continue to shift in the United States, it is becoming a national imperative that higher education better serve all populations.

While strategic attention is being placed on issues of retention, completion, and attainment, it is also argued that “the quality shortfall is just as urgent as the attainment shortfall” (AAC&U, 2010, p. 1), and there are a number of initiatives and organizations nationally that are designed to address quality. The Professional and Organizational Development (POD) Network in Higher Education exists to promote quality through improved teaching and learning practice and is the central professional association for those engaged in faculty development. Quality is central to the work of AAC&U’s LEAP Initiative, which promotes excellence in learning through faculty development, general education reform, high impact educational practices, and authentic assessment (Finley & McNair, 2013; Kuh & O’Donnell, 2013). In truth, most institutions are at work today developing a portfolio of solutions that address issues of quality, retention, completion, and attainment.

Tuition, Textbooks, and Student Debt

Although completion and quality are central to higher education’s work, the dominant public concern for most outside of higher education is cost (Humphries, 2012). Since the mid-1980’s, the cost of a post-secondary degree in the United States has been rapidly increasing (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006) due to increased tuition and associated miscellaneous costs, such as textbooks

(Paulson & St. John, 2002; Senack & Donoghue, 2016). Indeed, increases in tuition have been a direct response to the shift of cost away from the public in the form of taxes to students and/or their families (Humphries, 2012). Years of cuts in state funding for public colleges and universities have driven up tuition and harmed students' educational experiences by forcing faculty reductions, fewer course offerings, and campus closings. These choices have made college less affordable and less accessible for students who need degrees to succeed in today's economy (Mitchell, Leachman, & Masterson, 2016).

Although tuition has been the largest contributor in the equation of student debt, textbooks and ancillary materials are a key variable as well, especially since many students find it challenging to budget for the cost of books because they typically don't learn about the true scope of those expenses until the beginning of a semester. Depending on the specific course or discipline, the associated traditional commercial textbook can cost students several hundred dollars each semester (Fischer, Hilton, Robinson, & Wiley, 2015; Hilton, 2016).

While the increasing costs of attending college affect all students, low-income individuals and their families face greater difficulties than other socioeconomic groups in paying rising tuition and textbook fees (Kuh et al., 2006). This can directly affect their decision regarding where to apply and ultimately decide to attend college. Students with unmet financial need are more likely to delay their college enrollment or may not even attend college (Paulsen & St. John, 2002; Provasnik & Planty, 2008). This, of course, can have a cascading impact on future career decisions and employment opportunities (St. John, Paulson, & Carter, 2005). For individuals who do enroll in higher education institutions, some will make the financial decision to take courses without purchasing the textbook (Watson, Domizi, & Clouser, 2017), presumably negatively affecting their understanding of the course material, their subsequent performance (i.e., grade) in the class, and potentially their persistence in the discipline (Buczynski, 2007; Fischer et al., 2015).

Open Educational Resources

In an effort to curb the inflating cost of a postsecondary education and reduce student debt, there has been a growing movement in higher education regarding the authoring, adoption, and use of Open Educational Resources (OER) in course settings. OER are broadly defined as "the open provision of educational resources, enabled by information and communication technologies, for consultation, use, and adaptation by a community of users for non-commercial purposes" (UNESCO, 2002, p. 24). Within the higher education context, OER typically encompass free, online learning content, software tools, and

accumulated digital curricula that are not restricted by copyright license and available to retain, reuse, revise, remix, and redistribute (Hilton, Fischer, Wiley, & Williams, 2016). Within the context of this study, OER refer to free, open textbooks, which replaced previously adopted expensive, traditional, commercial textbooks. The narrative traditionally supporting the adoption and implementation of OER textbooks has focused on cost savings by making high-quality educational resources freely available to the students.

It is well documented in the literature that high-quality OER can lead to significant financial benefits for students and/or institutions, as well as reduce the potential of financial debt (Bliss, Robinson, Hilton, & Wiley, 2013; de los Arcos, Farrow, Perryman, Pitt, & Weller, 2014; Farrow et al., 2015; Fischer et al., 2015; Hilton, Gaudet, Clark, Robinson, & Wiley, 2013; Watson, Domizi, & Clouser, 2017). In empirical studies by Bliss, Robinson, Hilton, and Wiley (2013) and Hilton, Robinson, Wiley, and Ackerman (2014), college teachers and students reported significant cost savings on textbooks due to the implementation of OER in classes. Furthermore, several studies have shown evidence that the affordability of OER can effectively support at-risk learners in their efforts to finish their studies (de los Arcos et al., 2014; Farrow et al., 2015; Winitzky-Stephens & Pickavance, 2017).

Additionally, previous studies have found that a majority of faculty and students perceive OER to be equal to, or better than, commercial textbooks in terms of quality (Allen & Seaman, 2014; Bliss et al., 2013; Watson, Domizi, & Clouser, 2017). Many students preferred using OER instead of traditional textbooks (Feldstein et al., 2012; Petrides, Jimes, & Hedgspeth, 2012), citing the benefits of cost, access, and attributes of online textbooks (Bliss et al., 2013; Watson, Domizi, & Clouser, 2017). When evaluating faculty perception, a majority of the faculty rated OER equal or superior to traditional resources in terms of current content (91.2%), ease of use (88.1%), efficacy (84.6%), trusted quality (73.6%), and cost (97.9%) (Allen & Seaman, 2014).

While studies focusing on cost savings and student and faculty perceptions have dominated the OER research landscape, there has been less research that has looked at the impact OER have on student learning. Several studies have shown that implementations of OER may result in similar or improved academic performance in addition to saving students' money (Bowen, Chingos, Lack, & Nygren, 2014; Feldstein et al., 2012; Hilton & Laman, 2012; Lovett, Meyer, & Thille, 2008; Pawlyshyn, Braddlee, Casper, & Miller, 2013). It was found that students enrolled in courses that have implemented OER as the textbook perform just as well, if not better, in comparison to students enrolled in courses that use traditional commercial textbooks (Hilton, 2016; Hilton et al., 2016). Faculty also described OER as having prepared

students at the same level of rigor, and in some cases more so, as traditional textbooks (Bliss, Hilton, Wiley, & Thanos, 2013; Bliss et al., 2013). Further, some studies suggest that OER may indirectly improve student performance through increased satisfaction, engagement, and interest in the subjects (de los Arcos et al., 2014; Farrow et al., 2015; Pitt, 2015).

In regard to measures of student performance (i.e., final grades), several studies suggest that courses that have implemented OER result in higher student grades (Feldstein et al., 2012), higher pass rates (Fischer et al., 2015; Pawlyshyn et al., 2013), or lower failing and withdrawal rates (Feldstein et al., 2012) than courses that do not use OER materials. However, other studies do not find any significant difference in grades between OER adoption and traditional textbook use (Croteau, 2017; Feldstein et al., 2012; Lovett, Meyer, & Thille, 2008).

Of the studies that have evaluated student performance in OER vs. non-OER courses, we have not found any that examine differences between full- and part-time student performance, although research has shown that part-time students are less likely than full-time to graduate (Shapiro & Bray, 2011). Further, we are not aware of any research that has evaluated student performance with regard to student financial need or disaggregated student data to better understand the impact OER might be having on various student subpopulations, especially those that might be at the greatest risk of leaving college. In truth, one would not necessarily anticipate that OER would positively impact the performance of a student who would have otherwise been able to purchase a traditional commercial textbook; however, one would imagine that a free textbook would indeed help those students who might choose to forgo a textbook in a course due to the cost.

Purpose and Research Questions

The purpose of this research, then, was to better understand how courses employing OER impact student success metrics and student academic achievement by disaggregating student performance based upon federally determined financial need (Federal Pell Grant status), ethnicity, and registration status (part-time vs. full-time). We predicted that students from low socioeconomic backgrounds that require substantial financial assistance to attend college would exceedingly benefit from courses that have adopted a free textbook when compared to previous semesters when traditional, commercial textbooks were used (for the purposes of this paper are referenced as “non-OER” courses). Additionally, we predicted that all students perform better in courses that have adopted OER—regardless of socioeconomic or demographic background—as all students will indeed possess the materials needed to succeed in the course. In order to address these research predictions, we sought to answer the following questions:

- 1) What is the impact of OER textbooks on student academic performance, quantified by evaluating final grades and DFW (D, F, and withdrawal letter grades) rates?
- 2) Does the use of OER textbooks affect students from a low socioeconomic background (quantified by Federal Pell Grant eligibility status) disproportionately compared to students who do not qualify for Federal Pell Grant status?
- 3) Does student performance increase significantly for those from underserved populations when a free OER textbook is used instead of a traditional textbook?

Ultimately, we sought to determine if OER might address all three of the great challenges facing higher education today.

Method

Context of Study

The Center for Teaching and Learning (CTL) at the University of Georgia (UGA) began encouraging faculty to adopt OER in the summer of 2013. Like many institutions pursuing OER, the goal was to decrease the cost of higher education and student debt by helping faculty find and adopt free, high quality, online textbooks. With limited resources, the CTL developed a model that they anticipated would maximize cost savings for students while also minimizing the scope of work for the Center. They chose to pursue faculty who taught large enrollment courses and who were also currently using an expensive textbook or textbook/technology package. In this way, it was theorized that significant savings would be had by students with only a relatively small number of faculty adoptions of free textbooks. As a result of this course profile, the majority of the courses transitioned were large enrollment general education courses at the 1000-level. By the end of the Fall 2017 semester, it is estimated that 35,985 students had been enrolled in a UGA course that had switched from an expensive textbook to a free textbook. It is further estimated that these students had collectively saved \$3,266,930 as a result of this adoption (Watson & Colvard, 2018). While several different OER textbooks were used in this initiative, the majority were created by OpenStax, a nonprofit OER textbook publisher based at Rice University that is largely funded through philanthropic foundations, including the Bill & Melinda Gates Foundation, the William and Flora Hewlett Foundation, and several others (OpenStax, 2018a). The OpenStax publication process mirrors processes implemented by the “big five” textbook publishers: faculty author and

Figure 1

Timeline of the eight courses and adoption of OER. The black cells represent when the instructor did not teach that respective course for the given semester. The white cells represent when the instructor taught the respective course but used a traditional, commercial textbook. The gray cells represent when the instructor taught the respective course and used an OER for the course text.

Discipline	Course	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	Spring 2013	Fall 2013	Spring 2014	Fall 2014	Spring 2015	Fall 2015	Spring 2016	Fall 2016
Biology	Basic Concepts in Biology													
	Organismal Biology													
	Principles of Biology													
	Anatomy and Physiology II													
History	American History to 1865													
	American History since 1865													
Psychology	Elementary Psychology													
Sociology	Introduction to Sociology													

Table 1.

Count of Student Grade-Level for All Students Enrolled in non-OER and OER Courses. The Grade-Level: Other accounts for Transient, Graduate, and Unclassified students.

Grade-Level	Non-OER	OER
Freshmen	4328	3689
Sophomore	5001	3782
Junior	1560	1735
Senior	768	908
Other	24	27
Total	11681	10141

peer review of these textbooks. OpenStax's textbooks are 100% free and openly licensed (OpenStax, 2018b). The open license enables faculty to make changes to the textbooks if they so choose. As a result of OpenStax's publication approach and their OER's editable attributes, the CTL chose to focus the majority of their OER adoption efforts on titles provided by OpenStax.

Courses

This study evaluated historical student academic performance data (i.e., final grades) for eight different undergraduate courses at the University of Georgia (UGA) from Fall 2010 – Fall 2016. These courses were selected because they adopted OpenStax OER textbooks in place of traditional commercial textbooks. The eight courses in question span a range of disciplines, including science and social science courses:

- American History since 1865
- American History to 1865
- Anatomy and Physiology II
- Basic Concepts in Biology
- Elementary Psychology
- Introduction to Sociology
- Organismal Biology
- Principles of Biology

All of these are large introductory courses within their respective departments. Some of the courses are designed for majors, whereas most are designed to satisfy UGA's general education requirements.

While UGA launched its OER initiative in Fall 2013, the semester of adoption of the OER differed across these eight courses, but all courses used OpenStax OER textbooks. The courses under consideration used OER textbooks between two and seven semesters (see

Figure 1 for course by course specifics). Additionally, only sections of courses taught by the same instructor were considered. This was done to control for instructor bias in the analysis of pre- and post-OER adoption. For example, we did not consider sections of Principles of Biology taught by anyone other than the instructors who eventually adopted OER for their courses.

Participants

The timeframe selected for this study provided two large groups of students bridging multiple disciplines, as well as provided two groups of students of similar size. Specifically, there were 11,681 students in the group who were in courses using traditional commercial textbooks, and there were 10,141 students in the group who were in courses using free, OER textbooks. The grade-level breakdown of students enrolled in the non-OER courses and OER courses is listed in Table 1, with a majority of the students enrolled in the eight courses of interest for this study being largely comprised of lower level classmen (Freshmen and Sophomores, $n=9,329$ students for non-OER courses and $n=7,471$ students for OER courses) compared to the number of upper level classmen (Juniors and Seniors, $n=2,328$ students for non-OER courses and $n=2,643$ students for OER courses).

In total, there were 21,822 students in this study. Of those, 5,427 (24.9%) were Federal Pell Grant recipient students. Our study's Pell eligibility percentage closely approximates UGA's overall Pell eligibility percentage of 23.8%. In Fall 2016 UGA had a total undergraduate enrollment of 27,951 students with a sex distribution of 43.7% male and 56.3% female students. In this study, 35% of the students were male while 65% were female. For the purposes of this study, Pell eligibility served as a proxy for student socioeconomic status, and therefore, by evaluating student performance within the context of Pell eligibility, it allowed us to make an inference on how OER affected the grades of students from lower socioeconomic backgrounds.

In Fall 2016, the ethnic origin characteristics of UGA undergraduate students consisted of 4,835 non-White students (17.30%; not accounting for the Asian student population = 3,226, 11.54%) and 19,672 White students (70.38%). The ethnic origin characteristics of the students enrolled in courses under consideration for this study were 4,078 non-White students (18.69%; not accounting for the Asian student population = 2,549, 11.68%) and 14,938 White students (68.45%). Therefore, the breakdown of student ethnic origin in this study is representative of the student demographics of the university. All student ethnicity data were self-reported, so students that were classified as "Not Reported" were

removed from the analysis ($n=257$ students, 1.18%). Additionally, the aggregation of "non-White" student ethnicities did not account for Asian students who are outperforming White students in terms of degree attainment (National Center for Education Statistics, 2016). Our non-White category represents ethnicities that have been historically underserved by higher education and are attaining college degrees at significantly lower rates than White students and Asian students. The non-White category is comprised of American Indian or Alaskan Native, Black or African American, Hawaiian or Other Pacific Islander, Hispanic or Latino, and "Two or More Races" students.

Additionally, the registration status of undergraduate students enrolled at UGA in Fall 2016 was 26,328 (94.19%) full-time students and 1,623 (5.81%) part-time students. There were 19,419 (88.99%) full-time students and 2,403 (11.01%) part-time students enrolled in the courses of interest. However, when evaluating the registration status respective for the OER courses (between Fall 2013 and Fall 2016), the number of full-time students (9,649; 95.15%) and part-time students (492; 4.85%) more closely follows the breakdown in student registration status for the university in Fall 2016.

Data and Sources

Examination of student academic performance consisted of a multi-level approach. First, we evaluated academic performance of all students enrolled in select courses pre- and post-OER adoption. We then disaggregated the data to evaluate differences in academic performance for Federal Pell Grant recipient students and for non-Pell grant recipients. Finally, we again disaggregated based on student demographic data—student ethnic origin (White and non-White) and registration status (full-time and part-time)—and again compared academic performance pre- and post-OER adoption. Our data set consisted of all letter grades (+/-) and aggregated DFW grades, and all were de-identified to ensure student anonymity. All letter grades were converted to numerical representations (i.e., A = 4, A- = 3.7, B+ = 3.3, and so on) for statistical analyses. For all three sets of comparisons, we evaluated grade distribution, average course grade, and percent DFW grades for these respective student populations.

At UGA the Office of Institutional Research (OIR) possesses student course grade information and most student demographic information; however, the Office of Student Financial Aid (OSFA) is the institutional steward of Federal Pell Grant status. OSFA, working within strict and emerging federal guidelines, required that each course grade grouping contain at least 20 students within each category. This requirement was designed to protect student identities and thus required that we collapse the D,

Table 2.
Percent Student Grade Distribution Data for All Students Enrolled in non-OER and OER Courses.

Grade	Non OER	OER
A	17.96	23.46
A-	11.33	19.06
B+	12.99	14.13
B	22.10	17.02
B-	9.25	7.94
C+	6.75	3.90
C	7.75	5.55
C-	1.01	0.74
DFW	10.87	8.19

Table 3.
Percent Student Grade Distribution Based on Pell Eligibility in non-OER and OER Courses.

Grade	Non-Pell Recipients		Pell Recipients	
	Non-OER	OER	Non-OER	OER
A	19.48	24.90	13.48	18.97
A-	11.72	19.83	10.17	16.66
B+	13.70	13.90	10.88	14.84
B	22.49	16.46	20.95	18.77
B-	8.92	7.54	10.20	9.16
C+	6.30	3.87	8.11	4.01
C	6.88	5.20	10.30	6.65
C-	0.89	0.72	1.35	0.81
DFW	9.62	7.57	14.56	10.13

Figure 2

Average grade (Final grade) of students enrolled in courses pre-OER adoption (Non-OER) and post-OER adoption (OER). This analysis compared students that were not recipients of the Federal Pell Grant (Non-Pell) and students that did receive the Federal Pell Grant (Pell). The numbers over each bar represent the total number of students in that respective classification.

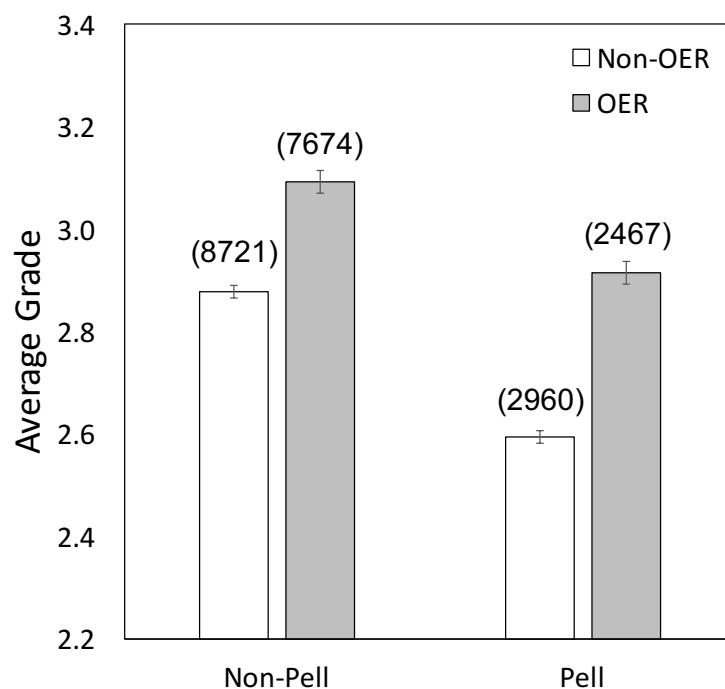
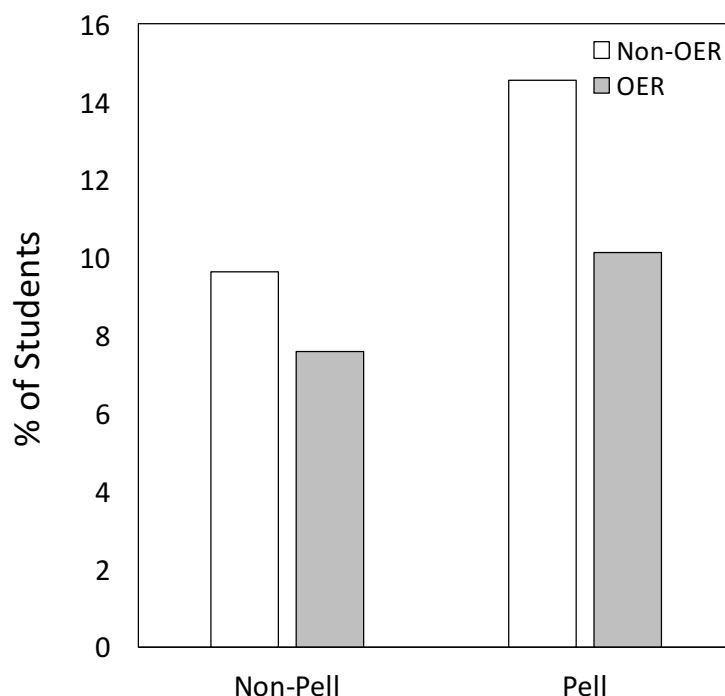


Figure 3

Percent of DFW students comparing Non-Pell and Pell recipients in course pre-OER adoption (Non-OER) and post-OER adoption (OER).



F, and W (Withdrawal) letter grades into a single DFW grade category. This collapsed category is also a metric of interest at UGA and many other institutions interested in DFW rates. Further, all “other” final grade classifications (e.g., Medical Leave, Military Leave, etc.) were deleted prior to analysis as such reasons for course withdrawal would not be related to course performance, financial need, or OER adoption.

To analyze the data for all students and groups involved in the study, two sample t-tests were used to compare non-OER to OER courses. To compare student financial aid status (Pell and non-Pell recipients), ethnic origin characteristics (White and non-White students), and registration status (full-time and part-time) with regard to enrollment in non-OER and OER courses, we used two-way ANOVAs with grade as the dependent variable and OER status and student demographic information as fixed factors. All analyses were completed using IBM SPSS Statistics for Macintosh, Version 22.0. This study received IRB approval from the University of Georgia Human Subject Division in the Office of Research. All data received from OIR and OSFA were de-identified in order to maintain student privacy and anonymity. In compliance with the IRB approval, all data were stored, analyzed, and interpreted on one computer device.

Results

All Students

We first compared academic performance of all students categorized into two groups – non-OER courses and OER courses – without stratification based upon financial need or student demographics, and there was a statistically significant improvement in final course grades for students in the OER courses ($M = 3.048$, $SE = 0.011$) compared to non-OER courses ($M = 2.806$, $SE = 0.011$) ($t(21,820) = -15.95$, $p < .001$). Table 2 displays the grade distributions for both groups of students, showing there was a decrease in the percent of DFW through B grades and an increase in the percent of B+ through A grades in courses using OER. For A grades, there was a 5.50% increase after OER adoption, a 7.73% increase for A- grades, and an 1.14% increase for B+ grades. Importantly, the presence of OERs decreased the DFW rate by 2.68% for all students enrolled in the respective courses.

Federal Pell Grant Recipient Students

Analysis of student performance for Federal Pell Grant recipients maintained the same trend as described for all students, with a statistically significant difference when comparing student Pell eligibility status ($F(1,21818) =$

173.54, $p < .001$), OER use ($F(1,21818) = 232.161$, $p < .001$) and Pell eligibility \times OER use, $F(1,21818) = 9.348$, $p = .002$). This study found there was a notable increase in B+ through A grades and a decrease in B through DFW grades. For non-Pell recipients, after OER adoption there was a 5.42% increase for A grades, a 8.11% increase for A- grades, and a 0.20% increase for B+ grades. For Pell recipients, after OER adoption we observed a 5.49% increase for A grades, a 6.49% increase for A- grades, and a 3.96% increase for B+ grades (see Table 3).

For non-OER courses, the final average course grade was 2.878 ± 0.012 (\pm SE) for non-Pell recipients and 2.594 ± 0.022 for Pell recipients; for OER courses, the final average course grade was 3.091 ± 0.012 for non-Pell recipients and 2.914 ± 0.023 for Pell recipients (Figure 2). This resulted in a 6.90% increase in non-Pell recipients' end-of-course grade and a 10.98% increase for Pell recipients end-of-course grade with the adoption of OER into the courses. In this analysis, OER adoption resulted in a 2.05% reduction in DFW grades for non-Pell recipients and a 4.43% decline in DFW grades for Pell recipients (Figure 3)

Student Ethnic Origin

When evaluating White and non-White students' academic performance, there was a statistically significant

difference in student ethnic origin ($F(1,19012) = 195.56$, $p < .001$), OER use ($F(1,19012) = 306.98$, $p < .001$), and student ethnic origin \times OER use ($F(1,19012) = 10.374$, $p = .001$). There were statistically significant differences in grade distribution for White and non-White students' academic performance; however, both groups' academic performance increased in the OER courses. Additionally, non-White students had a greater increase in B through A grades relative to the grade distribution of White students (Table 4). When comparing average course grades for these two demographic groupings, the results demonstrated a narrowing in the gap in academic performance between these student groups following the adoption of OER (Figure 4). In non-OER courses, White students ($n = 8152$) had an average course grade of 2.925 ± 0.012 compared to 2.525 ± 0.027 for non-White students ($n = 2029$). Once OER were adopted for these courses, the average course grade increased for both groups, specifically to 3.132 ± 0.013 for White students ($n = 6,786$), and to 2.857 ± 0.025 for non-White students ($n = 2,049$) (Figure 4). This resulted in a 7.09% increase in average grade for White students and a 13.13% increase for non-White students. Additionally, there was a large decline in DFW grades once OER were adopted in these courses. For White students, DFW grades accounted for 8.70% of the final grades before OER adoption, and that percentage dropped to 7.19% after OER adoption. For non-White students, we observed that DFW final grades accounted for 15.28% when traditional

Figure 4

Average grade (Final grade) of students enrolled in courses pre-OER adoption (Non-OER) and post-OER adoption (OER). This analysis compared self-identified White students and Non-White students – aggregating all other self-identified ethnicities, excluding Asian. The numbers over each bar represent the total number of students in that respective classification.

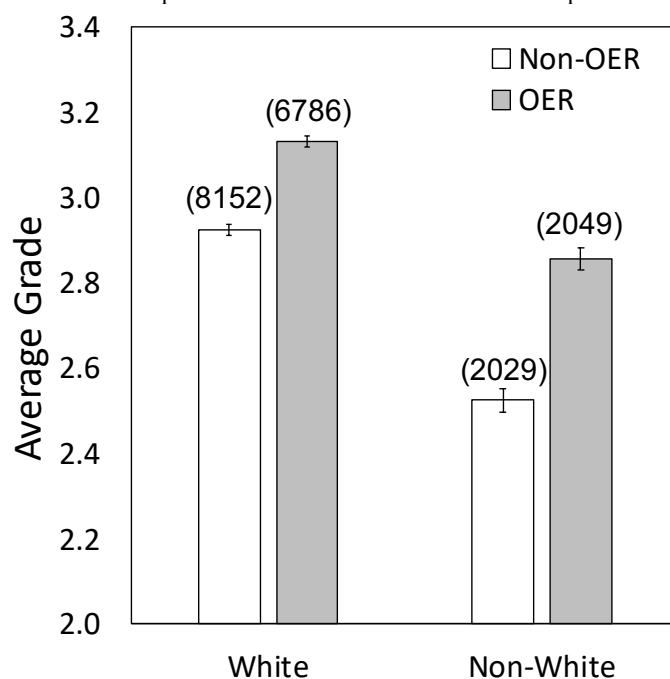
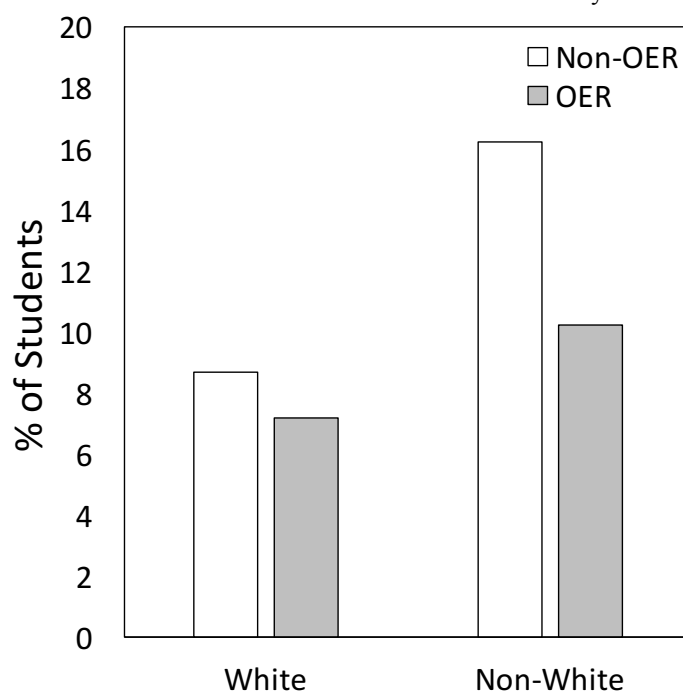


Table 4.
Percent Student Grade Distribution Based on Ethnicity in Non-OER and OER Courses.

Grade	White Students		Non-White Students	
	Non-OER	OER	Non-OER	OER
A	20.22	26.27	11.83	15.96
A-	12.51	19.95	8.33	17.23
B+	13.85	14.65	10.45	13.91
B	22.42	16.05	22.08	19.52
B-	8.91	7.54	10.40	8.44
C+	5.96	3.24	9.27	5.47
C	6.59	4.48	10.89	8.10
C-	0.85	0.62	1.48	1.22
DFW	8.70	7.19	15.28	10.15

Figure 5

Percent of DFW students for non-OER and OER based courses for White and Non-White students. Students classified as “Asian” were removed from the analyses.



textbooks were used, and we noted a disproportionately greater decline in DFW grades to 10.15% with the adoption of OER (a decline of 5.13%) (Figure 5).

Student Registration Status

Finally, we evaluated the impact of OER when considering student registration status by comparing full-time and part-time students. When evaluating grade distribution data for full-time and part-time students before and after OER adoption, there were two striking results that emerged. First, the shift to higher-level grades, while present for both groups of students,

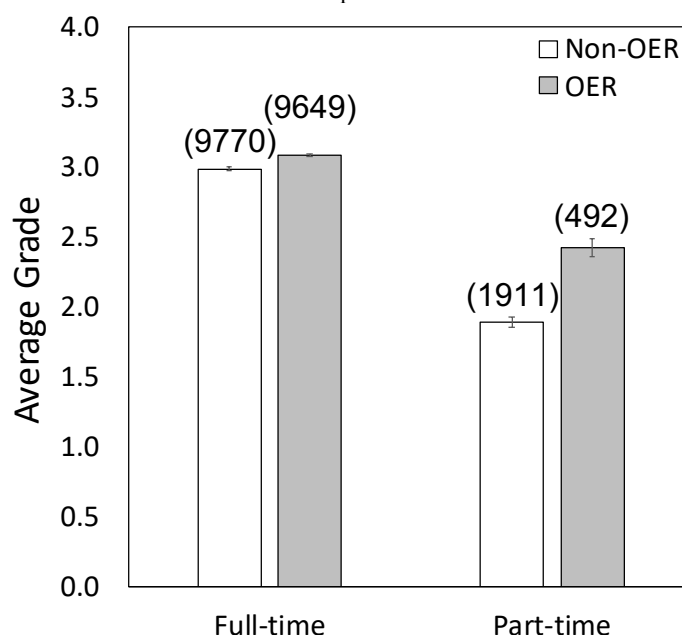
was more pronounced for part-time students than full time students after OER were implemented. Second, DFW grades dropped significantly more for part-time students than full-time students with OER (Table 5). We found a significant difference in student registration status ($F(1,21818) = 141.90, p < .001$), OER use ($F(1,21818) = 968.41, p < .001$), and student registration status \times OER use ($F(1,21818) = 59.68, p < .001$) for both full-time and part-time students. For both groups, OER adoption helped to raise average course grades (full-time: $M = 3.080, SE = 0.011$; part-time: $M = 2.420, SE = 0.067$) compared to course grades prior to OER adoption ($M = 2.986, SE = 0.010$;

Table 5
Percent Student Grade Distribution Based on Registration Status in Non-OER and OER Courses.

Grade	Full-Time Students		Part-Time Students	
	Non-OER	OER	Non-OER	OER
A	20.25	23.70	6.28	18.70
A-	12.67	19.47	4.45	10.98
B+	14.05	14.41	7.54	8.74
B	22.85	17.15	18.26	14.43
B-	9.11	7.80	9.94	10.57
C+	6.32	3.87	9.00	4.67
C	7.48	5.49	9.11	6.71
C-	0.99	0.73	1.10	1.02
DFW	6.28	7.38	34.33	24.19

Figure 6

Average grade (Final grade) of students enrolled in courses pre-OER adoption (Non-OER) and post-OER adoption (OER). This analysis compared students enrolled in the university at least 12 credit hours per semester (Full-time) to those students enrolled in at least 6, but no more than 12 credit hours per semester (Part-time). The numbers over each bar represent the total number of students in that respective classification.



part-time: $M = 1.889$, $SE = 0.033$). OER helped to narrow the gap in performance by increasing average course grades by 3.18% for full-time students and by 28.13% for part-time students (Figure 6).

When evaluating the impact OER had on DFW rates, we observed a slight increase from 6.28% to 7.38% in DFW grades for full-time students, though for part-time students OER adoption resulted in a decrease in DFW grades from 34.28% to 24.19%, which was a 10.14% decline (Figure 7). Closer analysis of these data showed the trend in DFW grades increasing for full-time students in OER courses, and this was

attributed to more reported Withdrawal grades (from 173 to 405 students) and fewer D and F grades (299 and 142 to 171 and 136 students, respectively), when compared to full-time students enrolled in non-OER courses. However, we did not evaluate why students withdrew from a course.

Discussion

While the financial benefits of OER are well-documented (Dimeo, 2017; Lieberman, 2018; Watson & Colvard, 2018), this study sought to determine if OER

adoption (in our case, free OpenStax textbooks) by faculty in course settings has additional benefits beyond saving students money. Statistically significant and important additional benefits were discerned. Without disaggregating the data, it was first found that students tend to perform better in course settings when OER textbooks were used in place of expensive, commercial textbooks. DFW rates also decreased. Following recommendations from AAC&U (AAC&U, 2015; Gavin, Bolton, Fine, & Morse, 2018), we obtained demographic information which allowed us to disaggregate our data by Pell eligibility status, ethnicity, and registration status. This enabled us to look more deeply into the data to better understand course performance outcomes for subpopulations of interest. While end of course grades increased for all groups considered, DFW rates decreased dramatically for student populations we hypothesized would benefit the most from free textbooks (e.g., Pell eligible students, underserved populations, and part-time students).

When considering Federal Pell eligibility, we observed an increase in A through B+ letter grades and a decrease in B through DFW grades when evaluating courses that have implemented OER at the University of Georgia. A significant decrease in DFW rates for Pell-eligible students was found (a 4.43% change) when OER were adopted as the textbook for the class. These results reveal a measurable decrease in the number of students

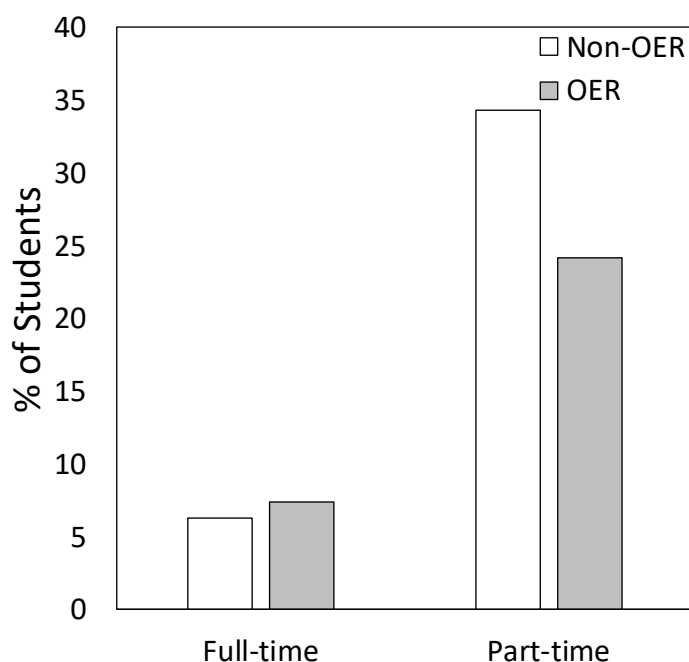
failing or withdrawing from a course when OER are adopted, and that decrease in the number of failing or withdrawal grades is more significant for students from low socioeconomic backgrounds (see Figure 3).

This research also evaluated student demographic metrics – ethnic origin and registration status – which helped to provide a more nuanced understanding of student academic performance with regard to OER adoption. This research revealed significant differences in academic performance (average final grade) for both White and non-White students enrolled in OER courses compared to previous semesters when OER were not yet adopted. The finding that students' final grades improved in courses that adopted OER is encouraging, but the magnitude in which non-White students' grades improved is very compelling.

Additionally, the benefits of OER are significant for part-time students. This study found a 53.12% increase in average course grade and a 29.54% decrease in DFW rates for students who were not enrolled full-time at UGA. These findings uniquely highlight the impact openly accessible content has on this non-traditional student population. Part-time students are an often overlooked population in higher education, and 71% are on their own financially (Bombardieri, 2017). It is not surprising that those enrolled part-time in college benefitted from free textbooks.

Figure 7

Percent of DFW students comparing Full-time and Part-time students in courses pre-OER adoption (Non-OER) and post-OER adoption (OER).



As noted earlier, students at UGA have collectively saved approximately \$3,266,930 since the launch of the initiative in 2013. The cost of higher education and the associated debt have a well-documented connection to drop-out rates (Goldrick-Rab, 2016); however, there is more to the OER story than simply reducing debt. Given the findings of this large-scale study, we believe the conversation regarding OER should change significantly. While compelling, the argument for OER as primarily a cost saving measure is incomplete and minimizes the value of OER. This study suggests that OER speaks to all three of the great challenges facing higher education today: affordability, retention and completion, and quality of student learning.

Although drop-out rates were not examined as part of this study, it is logical to deduce that reducing the number of students who fail would have a positive impact on retention. As noted above, OER were found to significantly decrease DFW rates across a range of demographics. They also have a more pronounced impact on grades for those who start further behind, are in financial need, and/or are among populations that have been historically underserved by postsecondary education. OER speaks to the aforementioned attainment gap as well. Still further, there is an expectation that grades are an indicator of student achievement within course settings, and by simply ensuring that all students, regardless of need or background, have access to course materials on the first day of class, the quality and extent of learning appear to be improved.

Study Limitations

It should be noted that there are limitations and assumptions made for this study. The analysis provided within this article only considers students at a single, large, doctoral-granting research university. This should be taken under consideration as readers evaluate the generalizability of these findings. Some of the course transitions to OER textbooks represented in this study included assistance from UGA's CTL, and it is probable that the adoption of the OER-based textbook served as a catalyst to further the instructors' engagement with their own teaching. Additionally, this study only evaluated end of course grades, though there are a number of course assessments that went into generating the final grades for these respective classes. The degree to which OER influenced individual assignment or assessment grades was not explored by this study and could not be determined based on the nature of the data set. Finally, this study evaluated large, introductory courses spanning a range of disciplines; therefore, upper class (juniors and seniors) students were a small percentage of the population under consideration.

Conclusion

This research suggests OER is an equity strategy for higher education: providing all students with access to course materials on the first day of class serves to level the academic playing field in course settings. While additional disaggregated research is needed in a variety of postsecondary contexts such as community college, HBCU, and other higher education settings to increase the generalizability of this notion, this study provides an empirical foundation on which to begin to change the advocacy narrative supporting OER. A new opportunity appears to be present for institutions in higher education to consider how to leverage OER to address completion, quality, and affordability challenges, especially those institutions that have higher percentages of Pell eligible, underserved, and/or part-time students than the institution presented in this study.

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Immersive Learning Environments as Complex Dynamic Systems

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In this paper, it is argued that education, especially in the online learning setting, should be viewed as a complex, dynamic endeavor. Design and evaluation grounded in systems thinking principles of relationships and connectedness, as well as complexity theory concepts such as self-organization and emergence, prove valuable tools for understanding what happens in education and helping to improve both theory and practice in online learning. Immersive environments provide rich opportunity for exploring these ideas, and they can help researchers and practitioners gain a rich understanding of education through complexity theory.

Given the level and complexity of challenges facing the educational enterprise, viewing challenges and potential solutions through a systems thinking lens provides opportunities to investigate the potential of local innovations to affect change at a systemic level. As Meadows (2008) states:

As our world continues to change rapidly and become more complex, systems thinking will help us manage, adapt, and see the wide range of choices we have before us. It is a way of thinking that gives us the freedom to identify root causes of problems and see new opportunities. (p. 2)

As educational institutions struggle for coherence in order to meet students' needs in the 21st century with an ever-changing technological marketplace, being able to identify the interrelationships and see how various components have the potential to impact the whole enterprise becomes critically important. Author of *The Fifth Discipline* Peter Senge (1990) defines system thinking as:

... a discipline for seeing wholes. It is a framework for seeing interrelationships rather than things, for seeing patterns of change rather than static "snapshots." It is a set of general principles—distilled over the course of the twentieth century, spanning fields as diverse as the physical and social sciences, engineering and management. ... and systems thinking is a sensibility – for the subtle interconnectedness that gives living systems their unique character. (p. 68-69)

He (1997) describes the system of education as one based on reductionism, competition and individual learning, and he cites the disconnect between our educational system and the current workforce as one that is derived from the fact that complex skills such as collaborative learning and problem solving are not taught within the current school systems or the online learning systems which help comprise them.

Better understanding systems thinking as it applies to education, technology, and the role of complexity,

specifically the notions of self-organization and emergence as mechanisms for facilitating learning, is necessary. It is the goal of this paper, therefore, to outline one university's approach to meeting the needs of adult learners within a virtual world, which can be seen as a complex, dynamic system. The paper will provide the theoretical rationale, as well as practical pedagogical and technological examples of how engaging learners through such a system can provide opportunities for more organic and emergent learning that is well-aligned with the needs of the complex, rapidly changing 21st century workplace.

As Cilliers (2005) notes, educational systems generally exhibit characteristics of those that are closed and controlled. Kennedy and Kennedy (2010) describe many of the assumptions of mainstream schooling: that knowledge is discrete and quantifiable, that learning proceeds by building upon unquestioned assumptions, that cooperation is necessary but a secondary dimension of classroom discourse, that the authority of the teacher is a sacred part of pedagogy, and that individual intelligence is the only relevant intelligence. They write:

All of these assumptions tend to support the social and historical maintenance of a closed or control system, and as such, may be characterized as undemocratic to the extent that they inhibit the ideal speech situation, and ignore the potential of the autopoietic process for optimal individual and group development. (p. 13)

These assumptions are evidenced in online learning environments as well, as designers call upon objectivist models such as Dick and Carey (1996) and Gagne, Briggs and Wager (1988) – requiring the setting or identification of prior knowledge, goals and/or learning outcomes, specific performance objectives, assessment strategies, and evaluation procedures (Moallem, 2001). These objectivist models typically translate to environments that predominantly distribute content, and do not provide opportunities for the levels and types of interactivity and engagement that are characteristic of more open and dynamic systems. While these models

Table 1
Education Viewed as Closed v. Open System

As Closed System	As Complex, Open, Dynamic System
Behaviorist/Objectivist	Connectivist/Constructivist
Focus on individual	Focus on community
Knowledge as discrete and quantifiable	Knowledge constructed in support of common goals
Authority of instructor	Instructor as guide and facilitator; distributed control
	Knowledge generated through interaction and collaboration; self-organization
Knowledge transmitted from teacher to student	Negotiated and personalized learning activities
Prescribed learning activities	Focus on learning outcomes and reflection
Focus on content acquisition	

have formed the basis for the design and development of many systems of learning, it can be argued that given the current generation of technologies, design models that are more complex and responsive to deeper levels of interaction are necessary.

Traditional Learning Systems

Instructional technologies designed for course management (CMSs) and learning management (LMSs) are used widely throughout higher education: they are, arguably, the most prevalent tools for online education at this level. Courses that are delivered through these systems typically emulate traditional models of face-to-face instruction. Bronack, Riedl, and Tashner (2006) discuss the many similarities: among the characteristics identified, they note that these courses and systems are content delivery driven, driven by assumptions of need and usefulness, not conducive to interactions with peers or mentors, and not characterized by the building of community. Lane (2009) expands on the notion by arguing that this is a factor of the very design of the systems widely used for online learning:

Course management systems each contain their own inherent pedagogy, and for most systems these pedagogies are traditional in nature. As with all technologies, the design of the product is a result of its perceived use. Today's enterprise-scale systems were created to manage traditional teaching tasks as if they were business processes. They were originally designed to focus on instructor efficiency for administrative functions such as grade posting, test creation, and enrollment management. Pedagogical considerations were thus either not considered, or were considered to be embodied in such managerial tasks.

The author goes on to note that, while these systems reflect nineteenth-century behaviorist pedagogies, the systems themselves are not completely to blame: 'novice' instructors with little to no training in online

pedagogy rely on the tools available to them. Many of the barriers to large-scale systemic improvement, therefore, become evident within the technologies that have been designed and developed to move traditional instruction to an online environment.

Weller (2009) further continues the discussion of Learning Management Systems (LMSs) in this way:

In elearning terms, current LMSs can be seen as the embodiment in code of the physical structures of learning. In Lanier's phrase they are further sedimentation as to how education should be conducted. This is acceptable if we believe that the existing educational model is the best there can be, but there are many issues in education which the current model struggles to address. (p. 182)

The author goes on to note the specific issues which seem to have not yet been addressed with online learning systems: limited curricula, personalization, changing demands, and informal learning. With growing numbers of students interested in online education, it is clear that solutions to these issues must be pursued.

Complexity and Dynamic Learning Communities

Wilson and Ryder (n.d.) challenge the traditional models of instructional design and delivery of online learning and call for more situated approaches. They present the concept of dynamic learning communities, with attributes such as flexibility, distributed control, and high levels of interaction. Wilson and Cole (1996), who expand on Scardamalia and Bereiter's (1994) concept of first-order and second-order environments, labeling them instead static and dynamic learning communities, look for schools to become dynamic knowledge-building communities. Scardamalia and Bereiter (1994) themselves state that "schools need to be restructured as communities in which the construction of knowledge is supported as a collective goal, and the role of educational technology should be to replace classroom discourse

patterns with those having more immediate and natural extensions to knowledge-building communities outside school walls” (p. 265). Therefore, it is important that educators be able to identify, develop and facilitate complex, dynamic systems that represent new models of learning and can provide the knowledge-building practices that connect to authentic contexts in order to work toward complex and dynamic systems rather than closed (Table 1).

The Possibilities of Open, Dynamic and Complex Approaches

In stark contrast to online learning systems that are products of a different era, in need of transformation, and in which innovation and learning are seemingly stifled by tools, lack of instructor support, and systemic barriers, a recently popularized and award-winning TED Talk entitled “Build a School in the Cloud” (http://www.ted.com/talks/sugata_mitra_build_a_school_in_the_cloud), presented by educational researcher Sugata Mitra, describes a project that was implemented outside of the bounds of any formal system of education.

The “Hole in the Wall” experiment involved installing a computer literally in a hole in a wall in a New Delhi slum and leaving it for children to explore and teach themselves. The study (Mitra, 2012) showed that students could teach themselves to navigate the internet regardless of location, language, and level of schooling. Mitra’s team placed 100 computers in 22 locations and estimated that approximately 40,000 children learned to use the computers on their own. According to Mitra (2012), “the Hole in the Wall study showed conclusively that groups of children can teach themselves to use a computer and navigate the Internet, irrespective of who or where they are, what language they speak and whether they’ve attended school or not” (Kindle Locations, 348-349).

While the “Hole in the Wall” project (Mitra, 2012) proved to be effective in teaching computer literacy skills, the context and setting of the project stand in stark opposition to most traditional educational institutions that are characterized by more seemingly closed, hierarchical, and rigid systems. Others who have problematized various aspects of the “Hole in the Wall” experiment, but support the pedagogical innovation aspect of the project, recognize the variety of challenges with integrating such types of learning into more formal systems of education (Arora, 2010).

Mitra (2012) attributes the results of this experiment to self-organization and emergence, and he posits that in order to understand learning we must further understand these processes. Specifically, he states: “I think the nature of learning is hidden in the new science of self-organization and emergence. To understand learning, we must understand how self-

organization happens and what leads to this mysterious process called ‘emergence.’” (Kindle Locations, 507-509).

When considering the role of complexity in education, Morrison (2008) notes:

Complexity theory poses a major question: What do the following mean for the philosophy of education: emergence and self-organization; connectedness; order without control; diversity and redundancy; unpredictability and non-linearity; co-evolution; communication and feedback; open, complex adaptive systems; and distributed control? (p. 19).

These questions provide us with a framework from which to consider the contrast between the barriers to innovation presented by closed systems and the mainstream technologies used to facilitate online learning, as well as the opportunities presented by initiatives such as the “Hole in the Wall” experiment. It then becomes necessary to consider how to leverage technologies to better facilitate deep learning and innovation. Complexity theory, which “concerns itself with environments, organisations, or systems that are complex in the sense that very large numbers of constituent elements or agents are connected to and interacting with each other in many different ways” (Mason, 2008, Kindle Locations 154-155), focuses on systems and structures that allow for self-organization, which in turn encourage the emergence of new concepts, properties, and behaviors.

Sawyer (2003) equates new conceptual structures with ant colonies by stating that emergence occurs through the interaction of simpler elements. In other words, just as ants self-organize to form new structures, so too can learners come together to create meaning. In an educational context, Davis and Sumara (2006), in their description of qualities of complex learning systems, acknowledge that by its very nature, complexity cannot be reduced to a variety of independent aspects that are dependent on each other in a very complex and dynamic manner, but do, however, identify self-organization, the bottom-up formation of collectives, and decentralized networks as characteristics of complex systems that facilitate emergence. As such, in order to begin to consider complex systems in educational contexts, it is necessary to view the interactivity between different parts of the systems, paying close attention to the structure of relationships and networks within. Newell (2008) notes that both teachers and students are complex adaptive systems in their own rights, but that dynamic local interactions make possible emergent behaviors that signal learning transcending that of individuals.

Therefore, a complex educational system may be defined as a “recursive, open system characterized by

emerging entities, the evolution of new capacities, and by developmental growth” (St. Julien, 2005, 101). Developing new models of complex, dynamic systems of learning by providing the mechanisms by which emergent understanding and conceptual development can occur is an important consideration for systems of education. Jörg (2009), in a discussion of the ways in which viewing education as a dynamic, non-linear complex reality may enable us to build a new science of learning and education, writes:

It is the very dynamics of sense-making in whole human beings through meaning-making in communicative human interaction that makes learning and development inherently complex, but also promising. The concept of learners should therefore be formulated as self-regulating, evolving learning systems, who evolve in their linking of systems by the activities of problem-based and problem-posed situations, and learn in and through communicative human interaction within learning-full reciprocal relationships (p. 13).

There is still much work to be done to design, develop, and evaluate learning systems and processes that are based in notions of complexity – self-organization and emergence that can facilitate emergent conceptual development and knowledge building.

Self-Organization and Emergence

When considering the various facets of complex, dynamic learning environments that are situated within constructivist frameworks of interactivity and learner agency, the notions of self-organization and emergence arise as constructs that are components of such theories of learning. As Mason (2008) states, “[I]t is in the dynamic interactions and adaptive orientation of a system that new phenomena, new properties and behaviours, emerge” (Kindle Locations, 174-175). Therefore, careful consideration of the constructs of self-organization and emergence can assist with further understanding ideas and initiatives that lead to creating innovative and effective learning environments.

Morrison (2008), who defines self-organizing systems as being autocatalytic and autopoietic, notes that self-organizing systems contain features of adaptability, open systems, learning, feedback, communications, and emergence. Self-organization itself, which has also been referred to as ‘bootstrapping’ (Jörg, 2009; Stanley, 2008) is generally considered to be a process in which systems bring themselves into existence with minimal direction.

Self-organization, which Davis and Sumara consider to be emergent, and credit as being the most important and most difficult aspect to appreciate, occurs when

“agents that need not have much in common—much less be oriented by a common goal – can join into collectives that seem to have a clear purpose” (2006, 81). The interaction of agents within an open, dynamic system, therefore, becomes a critical feature of complex systems as they can potentially self-organize in order to achieve certain goals. As Cilliers (2005) states as he lists twelve different characteristics of complexity theory, “complex systems display behavior that results from the *interaction* between components and not from characteristics inherent to the components themselves. This interaction is sometimes called emergence” (p. 257).

The result of the self-organization of agents within a complex, dynamic system therefore becomes that of emergent behaviors or structures. More specifically, the definition of emergence, according to Wikipedia (“Emergence,” n.d.) is that it “is conceived as a process whereby larger entities, patterns, and regularities arise through interactions among smaller or simpler entities that themselves do not exhibit such properties” (para. 1). To further contextualize and connect the notions of self-organization and emergence within the complexity theory framework, Stanley (2008) states:

Emergence, therefore, is driven by the self-organizing nature of a system far-from-equilibrium. It is in this manner that the notions of emergence and self-organization are linked. Thus, in the context of human beings, the self-organizing nature of local interactions gives rise to globally emergent, coherent patterns (p. 146).

Within the educational context, therefore, the concepts of self-organization and emergence become critically important as we consider the potential of technologies and pedagogies that can create emergent conceptual structures. For instance, in Scardamalia and Bereiter’s work on knowledge building (2006), they write that acquiring complex new concepts is a function of self-organization and emergence, equating this type of emergence to connectionist models of learning and ultimately dynamic systems of learning. They state that “the practical import of this discussion is that instructional designers need to think more seriously about ideas as real things that can interact with one another to produce more and complex ideas” (p. 104).

Additionally, from a larger-scale educational systems perspective, Davis and Sumara (2006), who liken the system of formal education to the modern factory in a teacher as worker and learner as incomplete product metaphor, look to complexity theory to enable a transformative process within the system that would more adequately align education to the needs of the adult world. They, too, rely on notions of emergence and interactive structures such as conversations as a way to facilitate the possibility of the occurrence of rich interpretive moments.

Beyond the “Hole in the Wall” experiment, we can see these notions of complex, constructivist, dynamic learning systems specifically related to notions of self-organization and emergence operationalized within online learning environments that are focused on community and connectivism/constructivism. For instance, Williams, Karousou, and Mackness, (2011), who distinguish between prescriptive learning systems and emergent learning networks, define emergent learning as:

Learning which arises out of the interaction between a number of people and resources, in which the learners organize and determine both the process and to some extent the learning destinations, both of which are unpredictable. The interaction is in many senses self-organised, but it nevertheless requires some constraint and structure. It may include virtual or physical networks, or both (p. 2).

Kennedy and Kennedy (2010) also form an emergent learning network through the Community of Inquiry (CI) framework. They discuss the role of self-organization and emergence from this perspective as they describe it as being a process of group inquiry that is a continuously emergent process. The main goal of their CI framework is one in which members build on each other’s ideas in a dialectical fashion in order to build a collective argument. Feedback, primarily from the facilitator, is a part of this dialogic and dynamic system and is an important aspect as it is seen as “a complex and dynamic combination of positive and negative instances, both of which drive the growth of the system, and contribute directly to its self-organization” (p. 6).

Therefore, as we see instances of complex, dynamic systems that are being applied within educational settings, investigating the potential for these systems to be applied to online learning environments becomes a critical next step.

Dynamic Learning with Immersive Technologies

One genre of innovative technologies that contains attributes and functions that can be leveraged to create complex, dynamic systems of learning has been labeled ‘immersive’ technologies. In basic terms, these are technological tools which allow users some type of sensory immersion in their use. In their description of the Immersive Education Laboratory (iEL), Gardner and Elliott (2014) cite the definition of immersive education provided by the Immersive Education Initiative (<http://immersiveducation.org>) as giving:

Participants a sense of ‘being there’ even when attending a class or training session in person isn’t possible, practical, or desirable, which in turn

provides educators and students with the ability to connect and communicate in a way that greatly enhances the learning experience (p. 2).

Common examples include tools which are known to provide a sense of immersion, or “being there,” are those that enable a sense of embodiment by use of avatars, such as virtual worlds and massively multi-player online role-playing games (MMORPGS). Other types of technologies considered immersive include augmented reality (AR) and emerging tools for user experience of virtual reality such as the Oculus Rift. Dalgarno and Lee (2010) note that immersion relies upon the technical capabilities of a technology to render sensory stimuli, and they argue that the fidelity of the representation, along with the types of interactivity available within the environment, lead to a high degree of immersion.

Schrader (2008) provides another useful lens for considering what defines an immersive environment, noting the difference between learning “about” technology to learning ‘with’ technology to learning “from” technology to learning “in” technology. The author writes:

It would follow that because the net generation’s cognitive engagement is so heavily intertwined with virtual spaces and content, the two are inseparable; their actions with the technology and cognitions are truly seamless. Another way to describe this immersion, integration, and depth of use is to suggest that users function, learn, and interact within the technology (p. 466).

An important consideration of the user experience in immersive environments is the way in which the individual can construct and represent an identity. In a discussion of virtual worlds, Dickey (2002) discusses three factors which help shape the user experience: presence, representation of self, and embodiment. This representation of self, or identity, is an important consideration: Wenger (1998) points out that having a sense of identity is crucial in learning organizations. Dalgarno and Lee (2010) suggest that an important aspect of a 3D environment is the way in which users construct identities through embodied actions and social interactions, but they note that this construction and portrayal of identity are consequences of representational fidelity and learner interactions which are facilitated by the environment. This idea of embodiment is important when considering virtual and immersive spaces, as Cheney and Bronack (2011) note:

The ability to sense the digital presence of others in environments such as virtual worlds, serious games, and simulations re-introduces the concept

of social facilitation into our online endeavors in ways that we have relied upon in traditional spaces, but have been difficult or impossible to utilize in web based ones (p. 80).

The discussion of learner interactions, and the ways in which immersive environments enable and enrich them, is tied to the ideas of presence and co-presence. Simply put, presence is the sense of “being there,” and co-presence that of “being there with others.” Dalgarno and Lee (2010) suggest that immersion leads to a sense of presence: that the technical affordances of these environments lead to psychological experience. When together in well-designed virtual spaces, students can interact with their peers, instructors, and the environment in ways that promote shared building of knowledge.

This notion of presence—being there with others—is one that has been prominent in literature on virtual and immersive technologies. The CI design of Kennedy and Kennedy (2010) mentioned above was developed based on the Communities of Inquiry (COI) framework, which was first introduced in 1999 (Garrison, Anderson, & Archer), and is perhaps the best-known theoretical framework for the exploration of technology-mediated communities. The COI framework explores three distinctive types of presence in online environments: social, cognitive, and teaching. Social presence is the ability of participants to communicate and develop relationships within a community; cognitive presence is the way in which learners construct meaning through discourse and reflection; teaching presence is design and facilitation of social and cognitive processes.

These three categories function together to enable communication, collaboration, relationship-building, and ultimately learning by all members of an environment.

This type of collaborative learning involves three constructs: learner sharing, learner interdependence, and active involvement of learners in activities (Yang, Wang, Shen, & Han, 2007). In other words, just interacting is not enough to produce a rich online learning experience:

Some have argued that in higher education, it is valuable and even necessary to create a community of inquiry where interaction and reflection are sustained; where ideas can be explored and critiqued; and where the process of critical inquiry can be scaffolded and modeled. Interaction in such an environment goes beyond social interaction and the simple exchange of information. A community of inquiry must include various combinations of interaction among content, teachers, and students. (Garrison & Cleveland-Innes, 2005, p. 134)

It is in going beyond mere interaction, of learners coming together in immersive environments to collaborate and create meaning, that it becomes apparent that immersive environments are indeed open and dynamic systems: those that focus on community, distributed control, and personal and mutual knowledge construction. As learners come together in constructivist communities of practice, the stage is set for self-organization and emergent behaviors.

AETZone: A Model of an Immersive and Complex Learning Environment

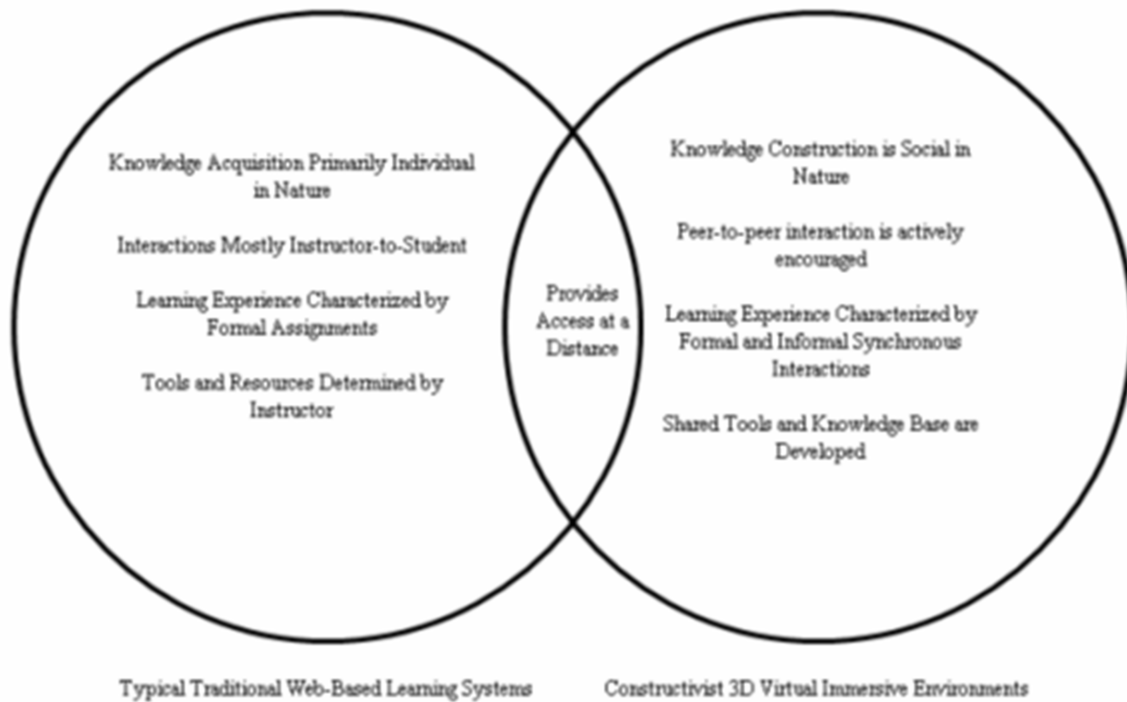
AETZone is a virtual world that has been used for graduate classes in education at Appalachian State University for more than ten years. At the time of its beginning, the University had adopted an LMS, which faculty members felt was passive, isolating, utilitarian, and lacking in opportunities for social connections to be made with other students or faculty. Students had little sense that others were present when logged into the LMS, a new set of tools that afforded an approach better aligned with a social constructivist philosophy was needed (McClannon, Sanders, Cheney, Bolt, & Terry, 2013).

As such, the creators of AETZone designed the system with social constructivist theory at the center, working to create an environment in which interaction and collaboration are key considerations. Jonassen (1997) argues that technologies should be used to keep students active, constructive, collaborative, intentional, complex, contextual, conversational, and reflective. Wilson and Ryder (n.d.) add the term “dynamic” to this list of characteristics of a learning community to emphasize a group characterized by the “distribution of control, commitment to generation and sharing of new knowledge, flexible and negotiated learning activities, autonomous community members, high levels of interaction, and shared goals and projects.” It is the ongoing goal of faculty in AET Zone to ensure that technologies are effectively utilized to create such learning experiences for our students.

The social constructivist approach of AETZone is in stark contrast to that of traditional online learning systems. Cheney et al., (2010) provide a comparison of the two (Figure 1).

Discussing the design of AET Zone, faculty noted that the environment is unique in that it is designed to meet the needs of learners engaged in self-directed meaningful activity within a community of practice. This environment is characterized by significant components of space, movement, physical presence and co-presence, conversational tools with small and large group shared workspaces, and metaphors and artifacts that assist collaboration and learning online in new and different ways (Sanders et al., 2007).

Figure 1
Traditional online learning systems v. constructivist 3d virtual immersive environments



An example of how this looks in practice is described by Becnel and O'Shea (2013). They outline a course in which Library Science students, working online in their own virtual public libraries, engaged in an extended epistemic game that required the participants to work as if they were practicing professionals in charge of libraries. Participants in activities like this one are given unique library spaces within AET Zone, which they can build and modify as they see fit. Working in teams, students created (and later modified) budgets, dealt with staffing and community relations issues, and completed other tasks related to library administration. AET Zone allowed for these tasks to be customized for each group, and surprises occurred along the way. Weekly challenges ranged from irate customers to storm damage to the libraries. Group members had to organize and adjust for both the custom tasks and the "bumps in the road," and they had freedom to deal with these issues in ways most meaningful to them. The interaction in courses, like this one in AET Zone, is guided by participants, with faculty acting as moderators, and students—and in some cases, general contractors—who help "build" the virtual spaces based on student budgets and priorities.

Presence Pedagogy

Drawing upon these ideas and others, the developers of AETZone developed a framework for

both design and evaluation of virtual environments known as Presence Pedagogy (P2) (Bronack et al., 2008). In this article, describing typical activity in this environment (Figure 2), the authors write:

Students work and interact with others present in the world, often across the traditional boundaries of class, course, or program area. Students respond to feedback and advice offered by faculty and peers present in the world when they are. Students are not limited only to their own course instructors, but instead are free to interact with and learn from instructors and peers from other courses and across multiple program areas. Students utilize tools and resources ever-present in the world in the context of authentic, hands-on activities, and projects. The multiple manifestations of presence enabled by this combination of content, context, and activity are the critical attributes for engagement among students in a social constructivist learning environment. Embedded within an immersive virtual world, they combine to create a new approach to teaching and learning that, in many ways, is significantly different from those on which educators traditionally rely and those which students typically expect (p. 59).

The idea of Presence Pedagogy was based on many of these attributes: conversations not bound by specific

Figure 2
Community of learners in AETZone.



courses meeting at a specific time; and student interactions with one another, instructors, and the environment itself. Learning activities are structured to be approached in groups, with maximum flexibility in the ways in which students investigate and present knowledge gained.

The core tenets of P2 are the shared values surrounding how educators and learners ask questions and correct misperceptions, stimulate background knowledge and expertise, capitalize on the presence of others, facilitate interactions and encourage community, support distributed cognition, share tools and resources, encourage exploration and discovery, delineate context and goals to act upon, foster reflective practice, and utilize technology to achieve and disseminate results (Bronack et al., 2008, p. 61-2). In a system such as AETZone, designed and organized around these principles, it can be demonstrated that immersive environments provide a clear pathway to complex, dynamic interactions. Some of the ways in which these principles manifest are included in Table 2.

It becomes evident that an environment such as AETZone, designed around constructivist ideas of presence, situated learning, and communities of practice, is one which exhibits many characteristics of complex, dynamic systems.

Recent data confirms that these notions of presence and community are significant in AETZone. Ongoing research utilizing the COI (Communities of Inquiry)

and SCI -2 (Sense of Community Index) have questioned both of these constructs from students' points of view. Findings from McClannon et al., (2013) confirmed that:

- Teaching Presence was a significant predictor of students' sense of community based on the COI scale; Teaching Presence was the strongest predictive variable.
- Level of immersion in the environment was a significant factor in students' sense of community based on the SCI-2; in fact, students in fully online cohorts were more positive in their perception than those in hybrid/blended cohorts. Reinforcement and Members Success Needs Met were the significant predictive variables;
- Time Spent in the virtual environment was a significant factor on the SCI-2. Reinforcement was, again, the significant predictive variable. It was also significant using the COI instrument – again, Teaching Presence was the predictor. The Direct Instruction variable also explained differences between students.

One of the most interesting things about these results was that they stem from a system which is designed to be complex: in which traditional direct

Table 2
Characteristics of Presence Pedagogy and Complex, Dynamic Systems

Complex, Dynamic Systems (Morrison, 2008)	Presence Pedagogy (Bronack et al., 2008)	Examples from Practice: AET Zone (Some examples from Bronack et al., 2008)
Self-Organization	Capitalizing on the Presence of Others	<ul style="list-style-type: none"> • Removal of the present hierarchy of expertise • Naming convention to identify instructors ('experts') who are available to all students no matter which program or course
	Facilitating Interactions and Encouraging Community	<ul style="list-style-type: none"> • Design which encourages participants to gather in shared spaces, enabling serendipitous interaction • Multiple spaces and tools for interaction and formation of community (large group forums, small group chat spaces, offices and workrooms)
Adaptability	Encouraging Exploration and Discovery	<ul style="list-style-type: none"> • Exploration and use of shared in-world tools, resources, and knowledge base. • Exploration and sharing of professional resources – constant user contribution
Open Systems	Sharing Tools and Resources	<ul style="list-style-type: none"> • In-world library manned by distance education library staff • Generative world that is constantly modified - all members are 'admins', free to add or change content and resources at any time based on their needs • Real-world projects shared with colleagues and peers
	Utilizing Technology to Achieve and Distribute Results	<ul style="list-style-type: none"> • Utilization of virtual world and associated Web 2.0 tools for communication and collaboration • Gallery crawls: learners post products and provide feedback on work of others
Learning	Stimulating Background Knowledge and Expertise	<ul style="list-style-type: none"> • Providing spaces and designing activities in which students can share personal and professional experience • Case studies and role plays drawing from real-life scenarios
	Delineating Context and Goals to Act Upon	<ul style="list-style-type: none"> • Participation in and negotiation of learning goals by all participants
Feedback	Fostering Reflective Practice	<ul style="list-style-type: none"> • Learner reflections embedded in each course
Communications	Asking Questions and Correcting Misconceptions	<ul style="list-style-type: none"> • Iterative process of cueing, guiding and questioning rather than telling • Asynchronous interactions utilizing Web 2.0 tools (Facebook, Skype)
Emergence	Supporting Distributed Cognition	<ul style="list-style-type: none"> • Creation of situations where learners' performance results from emergent, collaborative networks

instruction rarely occurs, and most classes only meet in synchronous full groups a handful of times in a given semester. Though instructors plan courses and learning activities, they design to encourage individuals and groups to work together to create relevant products.

Nevertheless, students reported across a number of measures that interaction with faculty was an important part of their sense of belonging to a learning community. This constructivist, immersive environment, in line with complex, dynamic systems as

demonstrated above, is a powerful tool, when combined with appropriate pedagogy, to inspire learning.

Research In and On Immersive Environments

There is a growing trend in the research to move away from traditional methodology when considering immersive learning environments. Cheney and Bronack (2011), in their discussion of research affordances of virtual worlds, draw the following comparison between research in the physical and virtual worlds (Table 3). This leads to a plethora of possibilities: instructors as participant/observers, learners' reflections on and reporting of in-world experiences and interactions, virtual ethnography and interviews, and design-based research.

Design-based research, instead of following traditional research models which dismantle complex systems to evaluate how each component works, seeks to put all components of a system together to see how the system functions over time. Dai (2012) states, "[W]e need a new methodology that is apt to handle the complexities and responsive [sic] to emergent possibilities and constraints involved in designing such a learning environment" (p. 12). The process, then, attempts to investigate the whole system and includes contextual, instructional, and cognitive variables. Dai further describes the unique properties of design research in educational settings as being one that deals with open systems, involves designing actions and processes for human beings (as opposed to object-based or agent-based subjects), and consequently deals with "soft" instructional designs with degrees of freedom that involve enactment through human actions and interactions. Wang and Hannafin (2005) describe design-based research as exhibiting the following characteristics: pragmatic; grounded; interactive, iterative, and flexible; integrative; and contextual. These characteristics echo many of those indicative of complex systems. In sum, and according to Greeno and Middle School Math Project Group (1998), design research is well suited for investigating complex teaching and learning because it situates itself at a level of

complexity commensurate with real-life teaching and learning conditions.

Design based research, with its focus on contextual issues, cognition, interactivity, and improvement of theory and practice, can provide significant benefit to the examination of immersive worlds as complex dynamic systems. Research by investigators of AETZone will continue to take this approach when examining the complexities inherent to the environment. Future projects include:

- Further exploration of formation of community and sense of presence uses repeated measure of the COI and SCI-2 indexes
- Examination of ways in which self-organization and emergence manifest in AETZone, including focus groups and analysis of written student reflections on their work in the environment.
- Continued design and re-development of the virtual world spaces and structures in order to best facilitate concepts inherent in complex, constructivist learning environments.

Conclusion

The project of education is among the most complex of human enterprises, arising in the nexus of individual interest, social need, disciplinary diversity, cultural self-perpetuation, and humanity's efforts to situate itself in the more-than-human world. Oriented by this realization, the insights offered by hard complexity research do more than inform education; they transform education (Davis & Sumara, 2010, p. 856-857).

It is obvious that attempts in recent years to understand and improve education in the United States have been based in a closed system approach: specific learning

Table 3
Research Affordances of Physical and Virtual Environments

	Physical	Virtual
Unit of analysis	Person-in-environment	Avatar-in-world
Environment for investigation	Experimental control	Constructed realism
Observational context	Experiment	Experience
Genesis of theory	<i>a priori</i>	<i>in fabula</i>
Population sample	Convenient	Created
Replication	Difficult; costly	Facile; free
Identity of investigator	Fixed	Fluid

outcomes measured by multiple choice and the emergence of 'big data' as indicator of educational progress. This trend is rapidly moving from K-12 to higher education, as nationwide, quantitative measures of things like the quality of teacher education programs make national news. This is certainly true of online education, as widely accepted systems such as CMSs and LMSs lend themselves readily to a behaviorist approach to the collection of data on student learning. As Jones and Brader-Araje (2002) note, after years of implementation, behaviorism fell short of producing the anticipated positive effects within the complex context of classrooms. These rigid, structured systems for designing learning experiences and examining data deny the inherent chaotic, complex, human qualities of educational systems, leaving an important process-oriented part of the picture unexamined.

It is within this context that it is apparent that a systems thinking approach to exploring educational systems adds a great deal of value. Senge (2006) states that systems thinking is "concerned with a shift of mind from seeing parts to seeing wholes, from seeing people as helpless reactors to seeing them as active participants in shaping their reality, from reacting to the present to creating the future" (p. 69). Therefore, providing online learning environments in which students can become actively engaged, embodied, and present carries great potential to facilitate learning that can be transformative.

This true transformation of education has not yet occurred despite a decades-old emphasis on strict quantitative measures. As early as 1991, Jonassen argued that evaluation should be driven by context, should assess experiential constructions (process v. product), include multiple perspectives, be multimodal, and require socially constructed meaning. It is not until education is viewed through these lenses of complexity, community, self-organization, and emergence that a true transformation of education can begin. Immersive environments provide a rich opportunity to begin this process.

Therefore, as we consider the possibility of full-scale transformation and systemic change, we are reminded by Mason (2008):

Complexity theory suggests . . . that what it might take to change a school's inertial momentum from an ethos of failure is massive and sustained intervention at every possible level until the phenomenon of learning excellence emerges from this new set of interactions among these new factors, and sustains itself autocatalytically (Kindle Locations, 178-180).

As such, we are reminded of the need to continue to design, develop and evaluate innovations such as the

AETZone that can, at its level, do much to inform, and ultimately transform, education.

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Connected Classrooms: Videoconferencing in TESOL Teacher Preparation

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Recent technological developments have afforded a proliferation of flexible online opportunities for teacher education (e.g., Chen, 2013). Videoconferencing (VC) is one of the most effective ways to engage students in collaborative learning (Wegner, 2015), as it makes in-class interactions more feasible (Bannan-Ritland, 2002). This descriptive study discusses the online teaching of graduate students in a TESOL program from the point of view of sociocultural theory (SCT) Lantolf and Thorne (2007) and media naturalness theory (MNT) (Kock, 2011). It analyzes the use of VC as the sole medium of instruction of future ESL teachers (N=12) who participate synchronously from different locations, including on-campus and distant classrooms. The participants' exit slips, as well as post-course anonymous surveys, are analyzed to identify elements of VC that have worked well and those that present challenges. The results provide an insight into what makes VC a compelling tool for the training of ESL teachers.

Videoconferencing (VC) equipment has become a large part of the corporate world in the United States (Weinstein & Litman, 2015), where it facilitates convenient alternatives to and promotes flexibility in the traditional work environment (Weinstein & Litman, 2015). Modern VC provides "a full collaboration experience including voice, video, and content" (Weinstein & Litman, 2015, p. 3). Within language education, private colleges and universities have used VC equipment to connect low enrolled classes through synchronous online teaching since 2011 (Tilsley, 2012). Public institutions of higher learning, however, have not, with few exceptions, been as quick to adopt this modality of course delivery.

This descriptive research study seeks to understand the strengths, weaknesses, and challenges that the VC modality offers in teaching graduate students in a Master's in TESOL program at a medium-sized state university in the Northeast United States. The paper provides a brief introduction into the institutional history of initiating a VC-based program, a discussion of the technical and pedagogical problems encountered by students and instructors, types of activities that promote the collaborative nature of TESOL teacher preparation, and students' experiences in such programs. The findings of this study are grounded in sociocultural theory (SCT) (Lantolf, 2012), which focuses on collaborative interaction as a way to co-construct knowledge, and media naturalness theory (MNT) (Kock, 2011), which helps determine how closely the electronic medium approximates face-to-face (f2f) communication. Despite a fairly specialized focus, the results of this study can be applied to other programs and models that are considering VC.

Preliminaries

Terminology. VC is a mode of instruction that involves synchronous video and audio communication

via a digital network among participants who are located in different geographical areas (Dal Bello, Knowlton, & Chaffin, 2007). VC provides students and instructors with live interaction that is similar to a f2f classroom setup, including real time small group activities, classroom presentations, and whole class discussions. Studies that focus on VC for teacher education point out the increased motivation that a variety of delivery methods bring to K-16 students (Cole, Ray, & Zanetis, 2004), the efficiencies of VC in overcoming obstacles of distance in teacher education programs (Morgan, Forbush, & Nelson, 2004), and the improved effectiveness of teacher preparation courses due to the removal of "barriers of time, logistics, and distance in creating meaningful field-based 'anchors' in the form of (a) observations of pupils in classroom environment, and (b) live, point-to-point interactions between teacher education students, pupils, their teachers, their parents, and school administrators" (Knowlton, Israel, & Griswold, 2007, p. 3621). In addition, Gleason and Schmitt (2018) have accentuated the importance of VC use for teacher candidates so that they have opportunities to develop technological literacies.

One of the key features of VC is its synchronous nature. Synchronous instruction assumes that all the participants are present online at the same time and participate through textual, audio-visual, or multimodal communication tools. Asynchronous instruction does not require the simultaneous presence of the participants by allowing them to access materials and make contributions via textual, recorded audio-visual, or multimodal communication tools at designated periods of time. As a result, asynchronous instruction is valued for its flexible scheduling and the ample time participants may use for self-paced learning (Bannan-Ritland, 2002; Wegner, 2015). Schrum (1998) points out that both synchronous and asynchronous modes of instruction can provide opportunities for group work and other types of

collaboration that students and instructors have come to rely on in an on-ground classroom. However, only synchronous instruction allows for a truly student-centered classroom (Weigel, 2002; Wegner, 2015).

A subset of synchronous online instruction is referred to as telecollaboration, defined as “the practice of engaging classes of geographically dispersed learners in online intercultural exchange using Internet communication tools for the development of language and/or intercultural competence” (Helm, 2015, p. 197). Telecollaboration allows for the textual as well as video presence of students in various locations. Telecollaborative modes of instruction have been largely applied to foreign language teaching in European and North American markets (Fuchs, Hauck & Müller-Hartmann, 2012). Since telecollaboration differs from VC in that it is used primarily as a short-term, task-based instructional venue rather than the sole medium of instruction, it will not be the focus of this study.

Despite the potential of VC technology for teacher education and professional development, there is surprisingly limited research of its utility and effectiveness in teacher education literature (e.g., Knowlton et al., 2007). Therefore, the goal of this study is to illuminate the benefits of synchronous online teacher preparation at the graduate level and to provide the reader with an analysis of interactive activities that have worked well for a cohort of TESOL graduate students.

The setting for VC-mediated TESOL teacher training. The university that is the site of this study is a medium sized (about 10,000 students) state institution that attracts a large population of commuter students at both the undergraduate and graduate levels thanks to its numerous undergraduate and graduate programs. Moreover, the university is known across the region for its teacher preparation programs. In recent years, Bilingual Education and TESOL were designated as licensure shortage areas in the state, and this shortage has prompted the university and its Master’s in TESOL program faculty to seek alternatives to traditional classroom instruction, thereby allowing teacher candidates from geographically distant areas to complete their Master’s degree and meet teacher certification requirements.

The TESOL faculty agreed that VC could present an attractive solution to the state’s needs by offering instructional options that incorporate synchronous video and audio inputs and vast opportunities for collaborative learning for both on- and off-campus cohorts of students. For fully functional virtual classroom observation and participation, the university installed the Cisco Sx80 TelePresence system, using two Precision 60 cameras and three Clear One Pendant microphones, as well as three 70” HD monitors, a TouchPanel room controller, and a wireless Lavelier microphone for the instructor. The classroom uses a

Session Initiation Protocol (SIP) gateway to receive telepresence phone calls and also has the ability to use the subscription service BlueJeans, a cloud-based VC platform that connects participants across locations and through a variety of devices. Additionally, it also provides the ability to record sessions thanks to its unlimited cloud storage capabilities.

Our partner site, a K-12 institution approximately 50 miles away, uses an older Polycom ViewStation. The camera is connected via an RCA cable to a television monitor and plugged into an Internet port. The distant classroom does not have interactive screens or transmitting capabilities. It utilizes one screen that allows those students to view either the interactive screen transmitted from the on-campus classroom or the participants in the on-campus cohort, but not both simultaneously.

Pre-semester training. To ensure that faculty teaching through VC are familiar with the equipment and are prepared to teach both on-ground and online cohorts of graduate students, the researchers received a small grant to cover the expenses of a two-day workshop led by VC experts. The goals of the training were as follows:

- Instructors and administrative support staff will be familiar with the basic functions of the VC equipment and will be able to operate the equipment seamlessly to facilitate communicative classroom activities;
- Instructors will understand the logistical and pedagogical challenges posed by synchronous distance instruction for teaching;
- Instructors will learn best practices for managing these challenges, such as administering tests and homework remotely, conducting pair and group work activities during class time, and working around conflicting institutional academic calendars; and
- Instructors and the Director of the Language Lab will learn to troubleshoot problems collaboratively if they occur during instructional time.

During the training, faculty members learned basic operational elements of VC, including camera control (via the remote/touchscreen interface), SmartBoard and pen use, and best practices for instructor placement to manage the exchanges between the on-campus and distant cohorts. The participants were also alerted to the conversational dynamic over VC, including body language/eye contact/participant feedback channels. As for web-based tools and platforms, participants discussed the uses of PowerPoint presentations within the VC framework, as well as different types of virtual whiteboards. There was a demonstration of small group

and pair work use during VC instruction where consultants advised faculty on how to select VC appropriate media. Finally, faculty participated in a hands-on teaching session of a brief lesson over VC.

The Study

This research showcases a descriptive pilot study of a teacher preparation class in a Master's of TESOL program that employed VC as an exclusive medium of instruction. The goal was to understand students' success and challenges with this modality and improve the TESOL program beyond this pilot stage. The researchers collected data on the following program attributes: a) student and faculty perceptions of the challenges of online education for graduate students in a synchronous VC environment, b) student and faculty perceptions of the benefits of VC classes, c) the nature of collaboration in VC courses, d) types of collaborative activities, and e) student and faculty attitudes toward a technologically-rich classroom. The data were collected through surveys, questionnaires, and exit slips, and they were analyzed and discussed within the specific context of the TESOL program.

Theoretical Framework

The analysis of the collected data relies on two theoretical frameworks: sociocultural theory (SCT) (Lantolf & Thorne, 2006) and media naturalness theory (MNT) (Kock, 2004; Simon, 2006).

Sociocultural Theory. SCT frames the approach to teaching and learning from the constructivist perspective with a major focus on interaction. Lantolf and Thorne (2007), following Vygotsky (1987), have shown that interaction opportunities are important for content learning at any level of study. Supporters of the SCT of language acquisition have maintained that collaborative assistance between an expert and a novice, or among peers, can create opportunities for better conceptual processing (Lantolf & Thorne, 2007; Mitchell & Myles, 2004). This means that regardless of the teaching mode (online or on-ground), it is essential that students engage in interaction and negotiation of meaning.

Meskill (2013) applied the principles of SCT to technologically-rich classrooms to emphasize the saliency of learning and learners despite the overwhelming presence of technology. Specifically, agency is assigned to learners, whereas technology is viewed as a tool (p. 4); online environments are considered within larger social, cultural, and institutional contexts of the learners and their activities (p. 5); assistance from more capable peers essential for development takes on new forms within online education (p. 5); online modality provides opportunities for all learners to articulate their thoughts orally and in

writing, which in turn creates ideal conditions for "internalization via verbalization" (p. 6); and language is assigned the role of a mediator in online communication, which aligns with its role as the primary mediating tool in human development (p. 8). The data analysis in this study seeks evidence for the principles of learners' agency, internalization via verbalization, and language as a mediation tool.

Media Naturalness Theory (MNT). It is assumed that f2f communication is the most natural communication that humans have developed. F2f communication involves three key constructs: cognitive effort, communication ambiguity, and physiological arousal. Kock (2011) maintains that f2f communication is built on co-location of the participants, synchronicity of communication, conveyance of facial expressions, body language, and speech. MNT considers the effectiveness of a communication medium based on the presence of these elements and the effect that it has on cognitive effort, communication ambiguity, and physiological arousal. That is, the more natural an e-communication medium is, the less it will increase the participants' cognitive effort, the less it will increase communication ambiguity, and the more it will increase physiological arousal (Kock, 2011). Two assumptions of the MNT are a) the presence of one of the media naturalness elements (synchronicity, co-location, body language, etc.) "will have a higher degree of naturalness than another e-communication medium that does not incorporate that element" (Kock, 2011, p. 390), and b) incorporation of one of the elements to a larger degree than others provides the e-tool with a higher degree of naturalness.

Thus, MNT allows researchers to evaluate and predict the effectiveness of the electronic medium selected *a priori* and to infuse it with additional elements when necessary to make it approximate f2f communication.

Method

This research relies on the form of a descriptive study that helps provide information about the naturally occurring behavior, attitudes, or other characteristics of a particular group (Shields & Rangarjan, 2013) in which the behavior of participants is not manipulated (Yin, 2003). Furthermore, this research considers details of the contextual conditions that otherwise would be ignored (Baxter & Jack, 2008). Thus, the study seeks to determine the value of an online synchronous VC class for participants' acquisition of knowledge, formation of learning communities, and participation in collaborative work.

TESOL participants. The group of graduate students (N=12) in this study consists of a distant cohort (N=6) and an on-campus cohort (N=6). The distant cohort of students, who are all certified teachers in the same school district, has stayed together throughout their coursework (10 classes). These students went through a competition to be accepted

into the VC modality of the Master's program in TESOL, where they were evaluated on their commitment to the program, their professional needs, and their level of interest and comfort with VC. The on-campus group consists of students who signed up for this section of the class either not knowing that it would be enhanced by VC or because there were no seats left in the on-ground section of the class.

Prior to the start of the course all students received an e-mail message from the instructor alerting them to the fact that this was a new format of instruction that would require their utmost dedication, patience, cooperation, and a very high level of preparation for each class in order to succeed. The distant cohort of students also received a 30-minute training session on how to use the technology in the classroom at their location.

Procedure. Students gathered weekly for 2.5 hours in their respective locations. All distant students convened at their designated VC location within their school district, while all on-ground students and the instructor came to the VC room on the instructor's home campus.

Each class started with greetings and housekeeping questions where the instructor directed cameras toward the on-campus group so that the distant cohort could see them, since the distant classroom only had one screen and could see either the on-campus cohort or the instructor and the screen with the PowerPoint presentation on it. After the initial five-minute exchange, the instructor switched the camera to a PowerPoint presentation. These presentations framed most classes and included links to videos, interactive small group activities, and discussions. In other words, the PowerPoint presentations were not strictly instructor-centered lectures, but incorporated the materials and guided all the in-class activities.

Depending on the topic at hand, each class included several small group activities, discussions, debates, collaborative problem solving, or other type of work that was aimed at building a learning community in the process of acquiring new knowledge. Each class period ended with a five-minute exit slips activity focused on two questions:

1. What helped you best understand the content and be involved in today's class?
2. What would you like to see done differently in today's class?

The instructor spent about 15 minutes after each class writing a free form reflection on the challenges and successes of the class from the technological and learning perspectives.

Upon completion of the course, all students were asked to fill out a post-course survey where they discussed the following questions:

1. How did you feel this semester using the

videoconferencing technology in TSL 502?

2. Was there any experience that stands out in your mind as particularly useful?
3. In your experience, what were the most challenging aspects about the experience?
4. How does your experience in this course compare to other graduate courses, either online or on the ground? Please describe your past experiences.
5. Having had this experience, what are your concerns moving forward?
6. Is there anything that the instructor could do to make the experience more beneficial?
7. In your opinion, what would you tell future MS TESOL students about this experience? What advice would you have for them about this course and its format?
8. What activities did you find particularly useful during this course?
9. Did you feel that you were a part of a learning community during this class?
10. What helped you form a learning community in this class?
11. Please make suggestions about making this class more interactive between distant cohort and on campus students.

Results

The results of the study fall into four categories:

1. Challenges of learning through VC;
2. Benefits of learning through VC;
3. Useful activities;
4. Collaboration and learning community.

These results are discussed through the prism of SCT and MNT as appropriate.

Challenges of Learning through VC.

The challenges of learning in a synchronous online environment were identified by both the instructors and the students as depicted in Table 1.

Benefits of learning through VC.

The students and the instructor identified the following positive features of VC-based learning:

- VC modality allows students to take classes without spending hours on travel, missing work, and looking for parking;
- Reliance on classmates and forming strong connections within cohorts for the graduate TESOL class;

Table 1
Challenges of Learning Through VC

Instructor-identified challenges	Student-identified challenges through exit slips and surveys
Extremely time-consuming preparation for class, including the changing nature of web-based tools	Inability to talk in class informally (not publically)
Difficulties in digitizing materials, particularly phonetic transcriptions and syntactic trees	Inability to approach the instructor privately during class for the distant cohort
Lack of consistent classroom setup across campuses	Turn-taking issues when responding in class;
Learning curve in using on-screen interactive tools	Lack of adequate sound when videos are played from the on-campus classroom
	Noise level for on-campus group presented a problem during small group discussions unless the microphone in the distant classroom was muted.

- Meeting people from different locations;
- Learning new technologies in pedagogically and professionally beneficial ways.

Useful activities.

The instructor and all of the students of the graduate TESOL class agree that collaborative work and small group tasks through the use of a web-based platform called Padlet were useful for better comprehension of the material. The choice of Padlet as a collaborative application and virtual whiteboard was not accidental. In the traditional classroom, the instructor relies on two activities to promote collaborative writing: a popular discussion-focused activity called Progressive Brainstorm (Gibbons, 2015) where students walk in groups around the room to discuss orally and then write down their responses to a variety of questions posted on the walls (Gleason & Schmitt, 2018) and a Think-Pair-Share activity where students first individually think through a question, then discuss it with a partner, and finally share it with another small group (Usman, 2015). The principles behind this type of task are deeply rooted in SCT: active learning, a social plane before internalization of knowledge, and work with more advanced peers. In order to replicate the idea of collaborative discussion and writing, virtual whiteboard applications were tested. Padlet was found to be the only application that allowed the instructor to prepare the whiteboard in the way that largely approximated the on-ground set up for the Progressive Brainstorm activity.

Two tasks that we would like to exemplify here are fusionality of languages and morphological analysis. In the first task, students divided into groups and were given a set of sentences from different languages. They were then asked to place

these languages on the fusional scale from isolating to polysynthetic. Each group was provided with its own scale. Groups could see and compare their scales and then had to defend their language placement in an oral debate. In the task of morphological analysis, students were given a set of data from a particular language and a set of questions that guided their analysis. Together they had to discuss the questions and then record their responses. Again, each group could see what others were doing and add their comments to the other groups' postings. Both tasks share a high level of collaboration, which ensures that all the work is done by all the partners involved in the task (Lund, 2013).

Collaboration and the learning community.

Both the instructor and the students commented extensively on the importance of collaboration and creation of the learning community among students. They identified the rigor of the classes as one of the contributing factors to developing a community of learners. The frequency of small and whole group discussions and group tasks was also credited with helping to form a community of learners in these classes.

Discussion

The results presented above are discussed from the perspective of MNT and SCT, as appropriate. Many technical challenges identified by the instructor and students can be considered within the MNT framework. For example, lack of an interactive screen in the distant classroom creates difficulties for maintaining essential elements of f2f interaction (Kock, 2011). Specifically, such a setup impedes the ability to convey and observe facial expressions and body language, as well as maintain synchronicity of communication. Consider

the following citations from students' responses:

"Some of the visual text is hard to read on the monitor" (Alice, online student).

"I think it was weird that we could not all see each other at once. The [distant] cohort could only see the teacher or the class at a time, so we did not get to know each other well. It would be great if there was a way for the two groups to collaborate together more" (Sean, online student).

Clearly, these comments indicate that the level of engagement across campuses is perceived as limited. Interestingly, the comments about the limited nature of collaboration among distant and on-campus students are juxtaposed with students' perceptions of a highly collaborative experience in their first semester of VC:

"I also enjoyed the group work because it was interesting to hear other ideas and perspectives." (Debrah, online student)

"I felt less anxious when you called on us individually. I enjoyed the very engaging discussion of the question at the end of class." (Nicole, on-campus student)

These quotes point to the highly collaborative nature of the class and to the fact that students themselves appreciate the benefits of collaboration for developing new knowledge and internalizing the existing concepts, which is in line with Lantolf's argument for the co-construction of knowledge within SCT (Lantolf, 2012). Moreover, it appears that students' comments regarding their enjoyment of "the very engaging discussion of the questions" point to both increased psychological arousal and cognitive effort that is similar in VC and f2f modalities (Kock, 2007, 2011).

Another challenge pointed out by the student participants pertains to the ability to talk in class informally and privately. For example, students may wish to complement each other or discuss issues unrelated to the lesson at hand. They felt that this type of communication was not available to them in a VC class since the microphones were always live and their private conversations were immediately broadcast to the collaborating school. From the MNT perspective, this feature of a VC class is significantly different from a typical f2f classroom where students are able to engage in private interactions more freely (Kock, 2005).

An important challenge of VC for the distant cohort is the inability to approach the instructor privately during class. Students had to send a message to the instructor or make a phone call in order to have a private conversation. Again, this difference between a

f2f and a synchronous online classroom needs to be taken into account during the planning stage, and it is important to provide additional opportunities for students to connect with the professor outside of class.

Students also identified turn-taking in responding to questions and participating in discussions as a challenge in the VC classroom. The primary cause of this difficulty is a minimal, but noticeable, delay in sound transmission, which resulted in an overlap of students' responses across campuses. This overlap created brief confusion until the instructor determined that it was necessary to assign the floor to one of the students. In terms of MNT, this delay resulted in communication ambiguity (Kock, 2011). With time, students got used to the time delay and waited to respond. Thus, the problem of turn taking was resolved, but it is worth considering during the planning stage as the natural floor-negotiation strategies that occur in a f2f classroom are not available in a VC setting. Furthermore, in an online classroom, it is useful to establish a waiting period after a question is asked and then for the teacher to call on a specific student to respond. Even in collaborative settings where groups report their findings, it is important to designate the respondents at the start of the activity and not to rely on students' choices.

As reported in the Results section, the participants also identified technical and instructional/learning benefits of a VC classroom. Clearly, saving time and money on travel to the on-ground location is a significant advantage for many students. This quote illustrates the views of students who would have been unable to enroll in the program had it not been for the online option:

"If all things were equal I would prefer to be on campus... saving two-three hours of driving in traffic and still being able to make it to committee meetings prior to class make the tradeoff worth it to me. I would not have joined the program if this option was not available" (Jennifer, on-line student).

However, outside of the convenience, there are several features of online learning that may aid in the overall construction of knowledge. For example, students note that they had to rely on their classmates to discuss theoretical points of the course and solve the assigned problems:

"I found it helpful to work with partners to understand the content of instruction" (Linda, on-line student).

In other words, students had to ask each other for assistance in order to succeed in class. While this need was orchestrated by the instructor through the use of appropriate collaborative tasks, it was the lack of the

instructor's one-on-one private accessibility to the learners that made it crucial for them to rely on each other in order to construct knowledge and apply it to problem solving. Thus, with VC as the medium of instruction, opportunities for student-to-student interactions and co-construction of knowledge become a necessity. According to SCT, this is an essential element of learning for teacher candidates: not only does it help in bringing the ideas discussed at the interpersonal level during class to the student's intrapersonal plane (Vygotsky, 1987), but it also has a particular importance for teacher candidates as it helps apprentice them in teacher training programs to the necessity of collaboration in the teaching/learning process.

Another integral benefit of VC and online learning in general is that future teachers learn new technologies and consider applying them in pedagogically beneficial ways:

"I think being exposed to technology like Padlet was useful because it is a resource I can implement as a teacher to engage students." (Emily, in-class student)

Technologies in a f2f lecture classroom are often used in a display mode, i.e. students observe the instructor using these technologies rather than utilizing them for their own work. In a VC classroom, nearly all technologies are participatory. In other words, they require that students upload their contributions to the relevant application and work with it in order to solve a problem or answer questions. Moreover, in the class discussed here, all technologies were deliberately used in an interactive mode, thus empowering students to be active learners and rely on each other to use discipline appropriate language in their negotiation of meaning while trying to find solutions for the tasks. By actively participating in the use of new technologies, students were able to learn not only the content of the class, but also the ways to incorporate technological applications into a variety of topics. They commented that, as teachers, they would infuse such technological tools into their own classes to promote a more collaborative environment:

"I think being exposed to technology in such an intensive way was useful because it is a resource I can implement as a teacher to engage students" (Sean, on-line student).

As mentioned above, one of the tools that was used most often for collaborative tasks in this class was Padlet. We analyzed students' and instructor's responses to Padlet. Recall that Padlet is a virtual whiteboard that can be set up by the instructor and/or students. The instructor is able to upload and display videos, photos, and documents that students can view, discuss, and respond to. Padlet allows developing tasks for individual students, small groups, or the whole class. Students can post their comments, reflections, essays, and other types

of responses in real time. While students work collaboratively on Padlet, the instructor can observe their writing in progress and listen to their discussions. Padlet can also be implemented in an asynchronous way for individual projects or homework. Padlet is cost effective as it is free for students and carries a nominal annual subscription fee for instructors. Overall, Padlet can be described as a collaborative interactive online tool (Lysunets & Bogoryad, 2015) that is easy to use, inexpensive, and readily available. It is particularly useful for collaborative tasks in language teaching. Sample activities developed for Padlet during this research are discussed in the Results section and illustrated in Appendix A.

From the perspective of MNT, the results of the analysis of students' and instructor's reflections and surveys indicate that Padlet approximates f2f communication in the following areas:

1. Students consistently point out that the "Padlet activity was a good way to reinforce various theoretical concepts introduced in class" (anonymous response in a survey). This indicates that there was no perceived increase in cognitive effort while using Padlet (Kock, 2005).
2. Students and the instructor pointed out the value of the immediacy of communication and feedback (Kock, 2011) provided by Padlet: "I enjoyed the collaboration on problems using padlet" (student exit slip); "I find it valuable that I can read students' responses as they are writing them and redirect the activity at any time" (instructor's reflection).
3. Padlet allows students to "not only discuss, but also track and write out our answers" (anonymous survey) and go "beyond the face-to-face medium" as they "could see everyone's responses right away and question them whenever we were in doubt" (anonymous survey), thus making communication less ambiguous (Kock, 2011).

From the SCT perspective, Padlet encourages:

1. Agency of learners (Meskill, 2013): "I liked the small group discussions because it helped me express my knowledge and also listen to what others had to say" (anonymous survey).
2. Mutuality of individuals and their sociocultural environment (Meskill, 2013): "It is good to work with our Stamford colleagues to see the variety of answers that we come up with" (exit slip).
3. Assistance from others (Vygotsky, 1987): "I enjoy working in groups on padlet and discussing out loud our answers between the classes. I feel like I am understanding and

getting a good hold on the material through these discussions" (exit slip).

4. Internalization via verbalization (Vygotsky, 1987): "A nice way for us to not only discuss but also track and write our answers"; "The discussion on Padlet proved to be very useful in clarifying my understanding" (exit slip).

Overall, Padlet is used and perceived as an interactive tool that allows students to collaborate, problem solve, build community, and negotiate meaning in the VC environment.

Conclusion

This descriptive study of using VC technology in a TESOL teacher education program indicates that it is a feasible alternative to f2f teaching and that it has clear benefits and some challenges. Several features shared by the VC and f2f classrooms include:

- Collaborative teaching/learning;
- Opportunities for negotiation of meaning;
- Visual presence of students and instructors;
- Real time communication; and
- Simultaneous availability of oral and written modalities in activities and tasks.

We identified the following differences between the two types of class environments:

- VC requires more attention from the instructor in designating the floor during collaborative tasks;
- VC lacks opportunities for informal and private communication among students;
- VC does not provide opportunities for private communication with the instructor during class for distant cohort; and
- VC allows for more convenience and time/money savings in regard to travel.

Overall, we find that given the convenience of VC, it is a viable solution for teacher certification needs, professional development requirements, and other aspects of teacher training when f2f meetings present a hardship that prevents teachers from engaging in the necessary course work. This is particularly important for teacher training in shortage areas, which includes ESL and bilingual education specialties. In addition to the usefulness of VC for course work, we find that teacher candidates in VC classes are exposed to, and actively engaged in, using current pedagogical techniques and technologies for learning. In other words, they are apprenticed into "the professional community of practice" (Darling-Hammond et al., 2005, p. 200) which trains them to infuse

technological tools and collaborative pedagogical tasks into their own classrooms.

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Appendix A

Sample Padlet 1

padlet

Elena Schmitt • 10d

Fusional language types

Discuss and place four language types (isolating, agglutinating, fusional, polysynthetic) according to their fusional on the continuum.

Group 1: SJA
 _isolating_____ agglutinating_____ polysynthetic_____ fusional_____
 less fused more fused

Group 2 Sean and Jess
 _isolating_____ agglutinating_____ polysynthetic_____ fusional_____
 less fused more fused

Group 3 Nicole and Valerie
 _isolating_____ agglutinating_____ fusional_____ polysynthetic_____
 less fused more fused

Group 4-Liz and Estephanie
 isolating_____ agglutinating_____ fusional_____ polysynthetic_____
 less fused more fused

Sample Padlet 2

History of English

Group 1 (Sean, Jen, Emily) - Timeline

1. 449 Anglo Saxons arrive in Britain
 90% of common English words from the Saxon Language
 This establishes the foundation of integrating vocabulary from invaders.
3. 793 Vikings/Danes take over Britain
 Viking and Saxons mingle and share "words"
 Pidgin languages were used to communicate between the Vikings and Anglo Saxons.
2. 1066 Normans invade Britain
 -Quickly integrated into English society
 -Our vocabulary was enriched with many French words
 -Less inflections and more prepositions
 This changed our vocabulary and the structure of the language. Word order became important as inflections were dropped.
5. Chaucer and the Canterbury Tales
 -First "writer of genius" to deliberately choose English
 He popularized reading of the standard language.

Group 2 (Annalisa, Jennifer, Linda) - Timeline

- ***1. 449 AD Anglo saxons arrive in "england" bring 90% of our most common words.
2. 793 AD Vikings - Danes invade and assimilate, melding features and vocabulary of both languages. Cultural revolution and conversion to christianity and adopted latin and greek vocal
3. 1066 AD Duke William invades from Normandy. French becomes the language of the upper class, law, government, art couture etc.
4. 1350AD Chaucer chooses to publish in english and formalizes grammatical structure.
5. Late 15th century - William Kaxston prints in London english

Group 3 (Liz, Valerie, Nicole, Estephanie) - Timeline

Explain your decisions:

*We believe that the order in which these events occurred was significance because the each event was dependent upon the event.

449- The Conquerors- Anglos Saxons and Jutes arrived in Eng made their language the main spoken language. (The language conquerors became the dominant language)

793- The conversion to Christianity (added borrowed words from Greece)

870- Alfred the Great saved the English Language by winning the Vikings in the north and creating peace in the south. This resulted in the use of articles, the Anglo-Saxon and the use of English in writing.

**1066- The invasion of the Normans. This resulted in the French influence in the English language which included a significant amount of new vocabulary and the importance of word order to be pronounced.

Writing Across the Curriculum in ELT Training Courses: A Proposal Using Data-Driven Learning in Disciplinary Assignments

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The process toward academic literacy aims at developing academic reading and writing together with higher academic competences of increasing relevance for undergraduate students as future teachers and researchers. Such a process is even more complex in ELT vocational courses where non-English speaking trainees study English as a system while they are in the process of becoming proficient users of this foreign language. This paper shares our action research experience with undergraduate non-native students at an English teacher training program in Argentina. From the Writing Across the Curriculum (WAC) approach, the implementation of data-driven learning (DDL) assignments has proved to contribute to their process of enculturation and the promotion of subject learning while fostering the development of disciplinary thinking.

Undergraduates in ELT training courses in non-English speaking countries such as Argentina face a complex challenge: while in the process of becoming proficient EFL users, students are also trained to belong to a professional/discourse community (Swales, 1990) that requires them to develop specific disciplinary knowledge skills and thinking patterns in the study of this foreign language. The process known as academic literacy goes beyond the development of academic reading and writing as linguistic macro-skills. It also engages trainees in the development of higher academic competences of increasing relevance for their future careers: more complex and reflective literacy skills related to academic enculturation (Bazerman et al, 2005; Carlino, 2013; Young & Leinhardt, 1998), such as critical thinking, data administration, and the correlated research skills.

From the Writing Across the Curriculum (WAC) approach, which, while promoting discipline-related writing instruction, acknowledges the complexity of the academic literacy process (Bazerman & Prior, 2003; Bazerman & Russell, 2003; Bazerman et al., 2005), this article advocates for the implementation of professional-like data-driven learning (DDL) assignments at ELT training programs. Understood as the study of large corpora containing authentic language samples to be analyzed using concordancing software (Hadley, 2002), DDL tasks require students to explore the occurrence of different lexico-grammatical items in context, analyzing the genuine, natural use of the language as seen in digital and digitized texts. The application of pedagogical research corpus assignments in ELT training courses at the university level has proven to provide enhanced teaching strategies, which, given their potential for bringing students into intellectual engagement and critical thinking in the English language, are bound to foster disciplinary knowledge while introducing students to their future research culture (Cheng, Warren, & Xun-feng, 2003;

Comelles et al., 2013; Garner, 2013; Tono, Satake, & Miura, 2014; Tsai, 2011).

This paper shares our action research experience with undergraduate non-native students at an English teacher training program in Argentina. Over the past two years, the implementation of DDL research assignments as part of the students' writing instruction has contributed to increasing the trainees' understanding and subject learning while promoting their involvement and the development of disciplinary thinking.

Academic Literacy and Writing Across the Curriculum (WAC)

Academic literacy in undergraduate courses has progressively been considered more than the development of reading and writing academic genre texts, and it is currently understood as an integral part of the process of becoming a competent member of the disciplinary/professional community in the field of studies undertaken: a process of enculturation into the academic world (Bazerman, 2005; Carlino, 2013; Chalmers & Fuller, 2012; Chanock, 2007; Foster & Russell, 2002; Hjortshøj, 2009; Lea & Street, 1998; Prior & Bilbro, 2012; Russell, 1990; Turner, 2004). Complex as this process already is for undergraduates who pursue their studies in their mother tongue, achieving academic literacy in ELT vocational courses in non-English speaking countries is even more challenging. Students are trained not only to become proficient EFL users, but also to belong to a scientific discourse community that requires them to develop specific disciplinary knowledge skills and thinking patterns in the fields of English language studies and other related disciplines.

In this scenario, WAC has provided an empowering teaching/learning approach, which promotes the development of academic reading and writing as

professional practices, as well as powerful epistemological tools for constructing disciplinary knowledge. This means reading and writing as the means to gain and get hold of, transform, and communicate knowledge (Bazerman, et al., 2005; Carlino, 2013; Jones, Turner, & Street, 1999; Prior & Bilbro, 2012; Young & Leinhardt, 1998).

WAC has operated a paradigmatic change in the development of academic literacy, mainly through various approaches to the advancement of theory and research in writing pedagogy (Bazerman et al., 2005). Aware of the fact that most writing assignments at this level are based on the materials that students read, the research agenda of one of these approaches has been the relationship between reading and writing, as well as the way in which the development of these macro-skills condition each other (Flower et al., 1990; Fulwiler & Young, 1982). Another approach focuses on student-centered engagement with disciplinary content, which is to be achieved through writing instruction (Fishman & McCarthy, 1996; Freedman, Adam & Smart, 1994). Yet another research agenda within WAC, known as the “rhetoric of inquiry” (McLeod & Maimon, 2000; Russell, 1994), focuses on the close relationship between reading and writing skills and the research thought patterns for the development of knowledge in the different fields. Although these approaches emphasize different aspects of the process of academic literacy, they cannot be considered independent fields; they often work together in WAC programs and writing teaching practices (Bazerman et al., 2005).

As a programmatic and pedagogical movement, the central aim of WAC is to change reading and writing teaching practices in the classroom, mainly by raising disciplinary teachers’ awareness of the close and defining relationship between reading, writing, and disciplinary content on the one hand, and research thought and learning patterns in different fields on the other. This knowledge aims at enabling and encouraging disciplinary teachers to improve writing assignments in their courses (Bazerman et al., 2005; Prior, 2013; Russell, 1990, 1994). The WAC approach promotes the implementation of professional-like, meaningful assignments in the classroom, thus fostering the process of enculturation (McLeod & Maimon, 2000) and the development of advanced literacy skills in institutional environments.

DDL in the EFL Classroom

The implementation of simple research assignments applying DDL can help students gain and consolidate critical thinking and knowledge in language studies, both about the English language as a system and about English as a foreign language in different disciplines. Pioneered in the classroom by Tribble and Jones (1997), Corpus Linguistics has contributed to the

EFL teaching and learning process by providing a large number of genuine natural texts in a way that makes it possible to capture and easily observe linguistic phenomena in digital and digitized corpora in co-textual environments. Römer (2006) identifies two approaches to the use of corpora in ELT: direct and indirect applications. On the one hand, direct applications are carried out by linguists and researchers for the development of teaching materials (Mussetta & Vartalitis, 2013). On the other hand, indirect applications allow students in the classroom to study language. As an example of this indirect application, DDL has proved to have a great potential for language teaching and learning (Aston, 2001; Braun, 2005; Burnard & McEnery, 2000; Johns, 2002; Sinclair, 2003; Singer, 2016; Tribble, 2015; Tribble & Jones, 1997). Profiting from the advances in ICTs, digital and digitized corpus-based pedagogy promotes a constructivist/inductive approach to language learning (Flowerdew, 2015), which also fosters critical thinking and an emerging but significant research culture as the defining aspect of the target professional community.

DDL is an original framework for comparing definitional and contextual treatments: a computer-based study of language that relies on samples of language use in its natural contexts. This method makes use of great collections of oral and/or written texts that contain millions of words in corpora gathered according to specific research criteria. The digital and digitized corpora can be electronically scanned, allowing for both quantitative and qualitative analysis. That is to say, they lend themselves to be studied in terms of frequency counts of different linguistic phenomena, as well as in relation to the interpretation of the numerous associations.

The possibility of observing the use of language in a great number of texts, not only at a micro level, but also at a macro level within and throughout a variety of samples as well as throughout various texts, registers, and disciplines, constitutes a powerful learning and research tool for undergraduate ELT trainees. These corpora represent an important empirical reference to the descriptions and analysis that EFL course books and traditional grammar texts provide about the use of the language. With the help of concordancing software, students find numerous examples in digital and digitized corpora to illustrate the prescriptive descriptions of the organized nature of language as provided by traditional grammar textbooks. Moreover, they may also find cases that contrast with and/or sometimes contradict those descriptions. Most of all, this computer-based linguistic analysis has simplified the research process since the computer fulfills the task of the statistical data treatment and allows for quick and effective verifications of working hypotheses.

In this type of research assignments, DDL can “challenge the traditional paradigms regarding the

learner and teacher roles” (Singer, 2016, p. 159). Indeed, teachers assume the role of facilitators, promoting both the students’ autonomy in their learning process (Bernardini, 2004) and the development of academic literacy in their ELT undergraduate courses.

The Tools

One of the software tools used in our classes for conducting data-driven language analysis is the Compleat Lexical Tutor (CLT), available at <http://www.lextutor.ca>, a free website developed by Tom Cobb from the University of Quebec. This website contains a vast range of resources for teaching, learning and doing research on vocabulary and grammar. Linked to entries in the WordNet dictionary, the CLT has corpus and text-based concordancers in different languages (at <http://www.lextutor.ca/conc/>) that allow users to scan various corpora in order to look at instances of language use in natural contexts. The available corpora in English, constantly enlarged and updated, include the Brown and British National Corpus (BNC) in both spoken and written forms, and an Academic General corpus of six million words (at <http://www.lextutor.ca/conc/eng/>). The highly operational interface offered by CLT makes this website for data-driven teaching and learning a user-friendly tool. The user can find specific information on the available corpora, fragments of the source texts that comprise the corpus in use, and links to other resources, such as the WordReference dictionary. Learners enter keywords and can customize the search, sorting the keyword to the left or to the right. Options include adding a second associated word for generating more specific results, and the concordanced output will show the keyword as it has been used in real contexts. The tool, which features a standardized or relative frequency count per million words, offers students the means to search for frequent collocates and to verify their own use of concordances for frequent words in different contexts.

Another software used in our classes to scan corpora for corpora research assignments is the set of basic tools offered by the software to read PDF documents. One of these features is the popular advanced search function, which allows the user to search a word or expression across a single PDF document or any number of them saved in one folder. This function is case sensitive, and it allows for the choice of searching family words.

Implementation of the DDL Research Assignments

In our action research, the DDL research tasks are assigned to undergraduate students in the second and fourth years of a four-year teacher training program in Argentina in two annual subjects: the Language class and the Literature class. While second-year trainees hold a

B2 level of linguistic competence according to the Common European Framework of Reference for Languages (CEFR) (Council of Europe, 2001), fourth-year students have already achieved a C1+ level of competence. The following sections outline examples of the implementation of various DDL research assignments in the Language class in second year and the Literature class in fourth year.

DDL Research Assignments in the English Language Class

One of the pedagogical applications using the corpus concordancer on Tom Cobb’s website for our second-year students in the English Language class is a research assignment aiming at both consolidating their grammar knowledge of reporting verbs and raising their awareness of the use of these verbal forms in academic genre texts (see Appendix A Assignment # 1). In this practice, students are presented with a list of reporting verbs whose grammar structure, clause patterns, and use have been previously studied and discussed. The trainees must do research using the online concordancer to verify the frequency with which these verbal forms are used in different contexts. Following, students compare and contrast the prescriptive rules in grammar textbooks and/or dictionaries with the actual use of the language in its natural environment. After peer discussion under teacher supervision, trainees are asked to submit a brief written report answering the questions posed in the assignment.

Another task involves exploring the use of verb patterns with infinitive forms with the aim of consolidating the grammar content and the meta-language students need in order to refer to the system of the language (see Appendix A Assignment # 2). The assignment includes a couple of verbs that are typically followed by infinitive forms. Students are first asked to verify and compare the frequency of these verbs in two different corpora. Next, the qualitative analysis consists in identifying the infinitive form that typically follows these verbs. Students answer questions on the structure of these patterns and on whether their findings coincide with the explanations provided by the grammar reference in the dictionary. Finally, they are asked to submit a brief report with their findings.

DDL Research Assignments in the Literature Class

In the context of the implementation of DDL research assignments with our fourth-year students in the Literature class, the advanced search function on PDF readers is used to raise students’ awareness about the use of the language in the discipline of literary criticism, such as the particular occurrence of certain

collocations and structures that are specific to the field. Given the lack of corpora comprising digital and digitized academic texts in the area of literary studies, the first task our students need to fulfill is the collaborative building of tailored corpora to be later scanned. For this purpose, they are asked to conduct an online search in the university digital library in order to collect glossaries of literary terms, textbooks on literary writing, and literary journals, which must be downloaded in a pdf format. Three general folders are to be generated: one for the glossaries, one for the textbooks, and one for the journals. Students are then required to classify the latter thematically in order to make future search tasks more efficient. There must be a different folder for each of the categories selected: for example, Modernist fiction, contemporary poetry, postcolonial studies, and so on. A single folder must also be created to include all the files together.

Once the tailored corpora are ready, the students are able to conduct different DDL research assignments by means of the advanced search function with the purpose of developing their competence as users of the language in the context of the discipline. For example, they are asked to check the occurrence of particular expressions to see with what frequency they are typically used by experts in the field, in order to contrast their usual lexis choice with that of those whose productions are published in the discipline (see Appendix B Assignment # 1). Next, the task involves the deeper analysis of those expressions with the highest occurrence in order to further their study of the structures they usually occur in, the words they typically collocate with, and so on (see Appendix B Assignment # 2).

Benefits of the Proposal

After two years of implementing DDL research assignments in our classrooms, we have observed how our students have profited from them in numerous ways. They have been introduced to research practices that they will consolidate in their future professional lives, and this has contributed to their process of enculturation, increasing our trainees' content learning while promoting the development of disciplinary thinking. Besides, they have become more confident in the use of technologies for educational purposes. In this regard, the choice of user-friendly software has allowed them to carry out the DDL tasks without being required considerable computer skills or much background knowledge in statistics. In fact, the mere result of the frequency counts of a keyword in different corpora already constitutes valuable information about the use of lexical items in natural contexts.

Towards a more qualitative analysis, comparing and contrasting the prescriptive rules given in grammar

texts or dictionaries with the actual use of the language for the different meanings of the language items under analysis has also helped raise students' awareness of the relationship between prescriptive descriptions of lexico-grammatical structures and the actual use of the language. Moreover, the decisions students need to make when customizing their search before running the concordancer, such as associated words to the left or to the right of the keyword according to the description of the clause pattern, already promotes critical thinking about the language as a dynamic system. Customizing the search of the keyword in order to retrieve examples of the verbs in their different tenses, for example, has also fostered meta-language acquisition.

The task involving the generation of their own tailored corpora in the literature class has also been beneficial in many ways. It has provided the students with their own resource, which would not have been available otherwise. More importantly, it has familiarized them with the scope and target of the different academic publications, as well as with the criteria for selection in terms of indexation, peer review systems, and the like, thus fostering the development of the academic skill of data administration. The decision making process at the time of generating the folders for the corpora—involving a basic knowledge of literary genres, movements, and approaches—has also contributed to the development of an increasing awareness in the literary field.

Indeed, tasks of this kind have made our students active protagonists of their own learning, as they are encouraged to carry out their own search practices once the tasks have been systematized. DDL conceives teachers as “directors or coordinators” (Singer, 2016, p. 158), aiming at exposing students to genuine texts as directly as possible, which, in the context of teacher training, fosters professional enculturation and the advancement of both linguistic and academic competences. In this respect, our proposal in its versatility lends itself to being applied to native speakers as well. It can not only foster their acquisition of a more professional, polished language, but also contribute to their process of enculturation through academic literacy.

Conclusion

So far, DDL assignments have only been implemented in two different classes in our teacher training program for the last two years. Our action research project still needs to be developed in time and applied extensively to other subjects in the program in order to systematize the practices we advocate for, as well as to consolidate their potential benefits. Furthermore, the actual impact of the implementation of DDL assignments in the classroom might only become evident in the long term, and even after graduation

since DDL is only one more pedagogical aid in a very complex process.

Nevertheless, from a constructivist approach, the implementation of simple but meaningful professional-like research assignments of an inductive nature in pedagogical corpus applications in our ELT training program—such as the examples in this paper—has proved to be fruitful. On the one hand, it has allowed for enhanced teaching/learning strategies that promote critical thinking while developing and consolidating content knowledge about the system of the language in direct connection to the use of the language in specific contexts. On the other hand, it has fostered the development of our trainees' academic skills that are essential in higher education and the target research culture. Going beyond the development of academic reading and writing as isolated macro skills in higher education, the process of academic literacy engages trainees in the development of professional competences. DDL holds the potential to be an empowering tool within the WAC approach in EFL teacher training programs.

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Appendix A

Assignments in the English Language Class

Assignment # 1: Reporting verbs revisited

In this practice, we will analyze the use of reporting verbs in digital/digitized genuine texts.

1. Run the CLT (<http://www.lextutor.ca/conc/eng/>) with the reporting verbs in the box using the Academic General corpus, and, with the help of the online dictionary, answer the questions below.

offer – refuse – agree – admit – regret – deny

- a. Are these reporting verbs frequently used in academic texts?
 - b. What are the most frequent clause patterns featuring these reporting verbs for the meanings described in the dictionary?
 - c. Does the explanation provided by the grammar reference in the dictionary coincide with the results of your search?
 - d. Provide examples to illustrate each case.
2. Submit a brief report with your findings.

Assignment # 2: Similar but different: *begin* and *start*

1. Run the CLT (<http://www.lextutor.ca/conc/eng/>) with the verbs *begin* and *start*, using two different corpora of your choice. With the help of the online dictionary, answer the following questions.
 - a. What is the frequency of these two verbs in the different corpora?
 - b. What form of the infinitive (*to inf.* or *ing*) are they typically followed by in the results of your corpus search? Is this pattern related to whether the verbs that follow them are state or action verbs? Or is this related to the tense these verbs are used in when constructing the clause?
 - c. Does the explanation provided by the grammar reference in the dictionary coincide with the results of your search?
2. Submit a brief report with your findings.

Appendix B

Assignments in the Literature Class

Assignment # 1: Occurrence and collocations of certain expressions and structures in literary criticism

1. Open the *advanced search function* on a PDF document. Check the occurrence of *piece of writing* in the Literary Criticism Corpus. How many times is it used? Is it a recurrent expression in this field?
2. Scan the same corpus for the words *poem* and *novel*. How many occurrences are yielded? What does this tell you about the specificity of the register in the field of literary criticism?
3. Review your own essays to extract recurrent expressions and structures you typically use (e.g. the verbs *express* and *depict*, or passive constructions like *it can be said that*). Following, scan the Literary Criticism corpus again to see how often they occur, and in what cases. Reflect about the differences between the way you use them and how they are used in professional contexts.

Assignment # 2: *Tone* as a typical analytic term in literary criticism: meaning and use

1. When writing a literary essay, sometimes you need to make sure that you refer to particular literary devices in an appropriate way, and a monolingual dictionary cannot help you much. Scan the Glossaries of Literary Terms corpus to compare and contrast the entries offered on the term *tone*. What features are considered in the different definitions? In your opinion, which is the most complete or appropriate definition? After considering the different entries on the term, can you think of a definition of *tone* of your own?
2. Now that you have a better understanding of the concept of *tone*, you can explore the way to use the term in your essay. The collocations dictionary might be too general in scope, and provide only few examples. Thus, scan the Literary Criticism corpus for the word *tone* and answer the following questions:
 - a. Is the sentence structure “The tone of the ... is + ADJ (eg. sad, ironic) recurrent?
 - b. What about the use of adjectives in the attributive position (ADJ. + tone)? Is it more frequent than the first case?
 - c. What structures is *tone* typically inserted in?
 - d. What adjectives are most recurrently used to refer to *tone*?
 - e. What other ways are there to refer to *tone*?

First Impressions: Using a Flexible First Day Activity to Enhance Student Learning and Classroom Management

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Every class has a first day, yet many professors only read the syllabus to students rather than more intentionally leveraging the day to set up understandings that enhance learning and classroom management. Logic, experience, and research indicate that it is not just content expertise that matters to student experience and learning: it is also the environment that the faculty member creates—ideally engaging students as active participants. This paper will increase awareness of the importance of planning and performing the first day, review alternative first day approaches in terms of the primary goals they satisfy—content connection, interpersonal connection, student face needs, motivation, and expectation setting—and provide a detailed outline, and rationale, for a flexible, transdisciplinary first day exercise, the Three Boards Activity, that offers benefits to both the students and faculty member and is adaptable to any size class. Handled thoughtfully, the first day can do more than convey basic information: it can also set the tone and model optimal attitudes and behavior for the classroom.

Much has been said about the value of active learning, yet how many take advantage of its benefits on the first day of class? Whether one uses their own personal experiences and those of their immediate colleagues as data or follows the literature on what faculty do on the first day of class and its effectiveness, it appears the opportunities to instruct and inspire for key learning are often squandered. This is unfortunate given that engagement on the first day has potential to ripple throughout the course and to connect to larger institutional concerns like retention (Crosling, Heagney, & Thomas, 2009; Provitera-McGlynn 2001). The expert observations of experienced teachers and a slowly growing literature from interviews with outstanding professors (Iannarelli, Bardsley, and Foote, 2011) to “how-to” reports and quantitative studies support the potential for the first day to make a lasting impression (Laws, Apperson, Buchert, & Bregman, 2010). Thus, it behooves faculty to take control of, and optimize, those impressions.

Despite evidence that what occurs on the first day or in the first week of class matters (Hermann, Foster, & Hardin, 2010), the first day is often used just to read the syllabus to convey course objectives and policies. This is better than simply passing out the syllabus and then dismissing class, but simply reading aloud or otherwise lecturing the students—even if it is on how they can succeed in class (Eves & Redd, 2014)—can convey that this will be another “shut up and listen” class where the teacher expounds and the students listen passively. Even if one has a lecture-based class and having students simply listen on Day One models much of what will happen later, there are still more productive ways to begin to increase the likelihood of *active* listening and to cultivate an environment of engagement and discourse that one presumably desires from students throughout the term. While faculty might

habitually offer, and students might report preferring (Henslee, Burgess, & Buskist, 2006), the conveyance of basic course information, first day activities need not be limited to organizational information, nor do they need to be solely the opposite, say, only a fun ice-breaker where personal information is exchanged.

Initial attempts at quantifying what happens on first days or what students might prefer indicate that students like an overview of the course and some detailed requirements (Bassett & Nix, 2011; Henslee et al., 2006; Perlman & McCann, 1999). Some of that is logical to offer, despite it being in the syllabus, but student reports of what they prefer should not be prescriptive as many would also prefer to not have to take the course at all or prefer to be handed an easy “A” grade. It is conceivable, if not likely, that students report this simply because that is what they generally experience and are not—by virtue of experience, and possibly maturity or ability to perspective-take—aware of well-crafted alternatives. Yes, students will want to know some about the content of the course, but they already will have some sense of what the class is about from the title, whether it is a required or an elective course, presumably having seen the books, rumors from friends, etc. Indeed, giving them a sense of the depth or breadth of the content—some of the big concepts or questions that the course will address—is useful. Yet there is arguably something more important on their minds that they cannot get from titles and books. As common sense, experience, and literature supports, the student first day agenda includes determining “what the professor is like, who the other students are, how instructors and students will behave, and what climate will prevail” (Erickson & Strommer, 1991, p. 87).

Indeed, sizing up their faculty members and how they personally will integrate naturally into the class—or need to grow to “fit in”—is key, especially when most students can, in theory at least, take a particular

class with a different professor or possibly at a later time if they do not like who they meet that day. What an individual student looks for in a faculty member likely varies, as some prefer “easier” or “harder” teachers, some tolerate harshness better than others, and some may see kindness as a sign of weakness. But all students are likely interested in how invested the teacher is in them and the material, as well as what “style” of class they are getting into. Logic tells us this, and, for instance, Wilson (2006) found that evaluations of a professor’s attitude toward students are positively related to student motivation, learning, and overall ratings of the instructor. Thus, thinking through how we as professors are perceived at the start is worthwhile.

The first week of classes, and especially the first day, can help faculty and students alike have a more successful term if those initial interactions are used well to establish a productive tone, set norms for optimal attitudes and behavior, and help underscore the meaningfulness of the course material to individuals, the field, and/or the world. That can all be done while correcting misperceptions about the course and preparing the students for the work that lies ahead. Building rapport with and between the students creates the potential for a bond that conveys, “There’s something here worth learning with an interesting group of people,” rather than, “This is going to be another boring/hard/useless class I have to get through with other people that probably feel the same way.” Consider what tone you set. Is it accidental or intentional? Psychology researchers found that even a brief first day intervention to increase motivation did, in fact, increase student perceptions of course interest and instructor caring (McGinley & Jones, 2014). In a different vein, Kaplan, Stachowski, and Bradley-Geist (2012) found that students who engaged in a demonstration involving making personality (dis)agreements on the first day of introductory and personality psychology courses later performed more accurately on relevant material than students who did not engage in that first day activity.

Whether working with traditional younger students (currently the Post-Millennials or Generation Z, with the Gen Alpha close behind), returning students, or non-traditional adult learners, people are busy and distracted, and they may approach the class with a consumerist attitude and be less practiced in taking responsibility for their own learning. Many are accustomed to being connected to technology and multi-tasking, so if the first day is a snore, it could undermine their interest and motivation for the coming days. If it is dynamic, it conveys the possibility of that energy being there in future days such that even if the class is of necessity, in general, dense or plodding at times, the first day can buy some grace in their attitudes toward the teacher and the material. Similarly, the more compassionate or

competitive among the students may participate more later to “help the teacher out” based on the attitude they formed of the instructor on the first day.

Given the logic and benefits of making productive use of the first day, it behooves us to reflect on what we do with the first day and why. Are we acting out of habit or modeling after other neutral to ineffective first day examples we’ve seen? Might we choose out of laziness or some sort of fear or shyness? Do we do what we do simply because we don’t have any better ideas about what else to do or how? Rather than sharing one’s bio or reading the syllabus aloud—both of which are items the students can read in detail outside of class, and even be quizzed on Day Two or online—the time and attention should be diverted to making the class mostly about the student(s) and the material.

Beyond presenting discipline-specific content on the first day, faculty have used a number of different alternative first day activities to enhance learning and classroom management. While there is a wide range of activities, they all have in common that they attempt to create a fertile learning environment, and they attempt to make the material more interesting for the students and thus motivate the students to engage the material on a deeper level. How they achieve this varies. Some approaches attempt to establish stronger connections amongst students and/or between students and faculty. Others aim to provide more meaningful connections between the subject matter and the students.

Productive Alternative Examples of First Day Approaches

While it remains commonplace for many faculty members to limit the first day of instruction to handing out the syllabus and granting early dismissal, there is a growing trend for faculty to take greater advantage of the first day by engaging the students in a variety of activities. Some of these activities are discipline-based and stress content while others concentrate on setting up understandings that enhance learning and classroom management. They engage students as active participants and variously establish a productive tone, motivate students, set norms for optimal attitudes and behavior, help underscore the meaningfulness of the material to individuals and society, and create connections between people in the class. Naturally, there will be some overlap in the categories below—they cannot be wholly discrete—but seeing potential first day activities through these filters will build understanding and underscore how the proposed activity meets several of the goals at once as, presumably, most professors are able to take on the challenge of how to balance creating a safe, even nurturing, community while maintaining sufficient rigor, instructor credibility, and attention on the “face needs” of students, such as feeling competent and included (Gaffney & Whitaker, 2015).

Primarily Content Based

Making more meaningful connections between material and students is often accomplished by engaging students in a demonstration or puzzle that is designed to involve the processes and concepts that they will study. For example, Bennett (2004) had students in a psychology statistics class each announce their date of birth until a match was found with two students born on the same month and day. It turns out that with classes of 30+ students the probability of a match is .75. In a physics course that involved substantial quantitative reasoning, Gaffney and Whitaker (2015) asked students Fermi Questions on the first day. Fermi questions involve providing approximate quantitative solutions to problems for which it is either very difficult or impossible to provide an exact solution such as, “How long would it take to walk from the classroom to a named city?” Another way to make material more meaningful is to show how it can be used in practical situations. Gallia (1996) presented an overview of all of the important concepts to be covered in an undergraduate nursing pharmacology course. After the overview, each concept was presented in turn together with an example of a nursing practice situation in which the concept could be applied. Examples like these highlight how the material can be made more interesting, or at least how it will be useful later.

Some faculty get other people involved in making the first day memorable while still introducing meaningful content. For example, LoSchiavo, Buckingham, and Yurak (2002) had a confederate enter the social psychology classroom prior to the actual instructor. The confederate asked the students to fill out an information sheet and then to stand up and face the back of the room. The confederate then left, and the professor entered the room and asked the students why they were standing and facing the back of the room. The surprised students reported that they were told to do so by the person who was previously in the room at the time and who they assumed was the instructor. The professor then went on to discuss the concepts of obedience, conformity, and deception which were experienced in the activity, concepts to which the students often assume they are immune. Similarly, Higgins (2001), a sociologist, enlisted a student ahead of time (unbeknownst to the others) to behave “deviantly” to foster discussion and connection. Relatedly, Dorn (1987), and Winston (2007) offered insight on how using the first day itself can anchor content, showing how common first day occurrences, such as the act of strangers coming together and self-introductions, can be leveraged to demonstrate a critical analysis of this ordinary experience, sensitizing students to a sociological lens facilitating their “perception, consideration, and ultimately, understanding” of new material (Winston, 2007, p. 161; See also Broulliette & Turner, 1992).

Lest one argue that doing a meaningful content-based first day activity is less possible in certain disciplines, consider from chemistry that there are examples of productive first day approaches for an upper-division undergraduate physical chemistry class that uses the first day to introduce the development of macroscopic, molecular-level, and mathematical models (Bruce, 2013); for a lab course that uses an activity to introduce concepts related to thermal expansion of liquids as well as skills in precise measuring, graphing, note-taking, and analysis (Padgett & MacGowan, 2013); and a general chemistry II course where a brief Jeopardy-style game is used for part of the first day to test/remind students about prerequisite material so they can learn expectations and more quickly connect previously learned material with what is coming up next (Eves & Redd, 2014). From another science, there is an example from a biology course (Metzger, 2013) where playing an organism/key theme related card game sets the stage. From history, Mugleston (1989) outlines how to touch on substantial matters in history—like women’s history and black history—to intrigue the often “captive” audiences found in history classes. From economics, Helmy (2016) uses a lottery on the first day that forms the foundation of a structured assignment throughout the term. From communication, Kelly and Davis (2011) offer a way of introducing meta-theoretical assumptions for a research methods course. The list could continue, but, as mentioned above, there is more to consider doing on Day One than primarily content-based approaches.

Primarily Relationship Building

Whereas content-based first day activities are designed to facilitate stronger connections between course material and students, activities in this section are more focused on establishing connections amongst the students and between the students and the faculty member to build community. For instance, Foster and Herman (2011) used a reciprocal interview technique to build such connections. After handing out the course syllabus the instructor divided the students into small groups in which they discussed the syllabus and other aspects of the course. One student from each group was then selected to interview the instructor regarding questions that arose during group discussion. Following this activity students reported feeling more comfortable in approaching the instructor and more comfortable participating in the class. McGinley and Jones (2014) tested two first day alternatives in their psychology classes by dividing students into control and experimental groups. Students in the control group were told to read the syllabus and were then dismissed while students in the experimental group were partitioned into small groups and were asked to discuss

perceptions about the class, feelings about the class, how the class relates to short- and long-term goals, and topics that interest them in the class. Both perceptions of course interest and ratings of instructor caring were higher in the experimental than the control group. In a very different approach, Armstrong (2008) developed a method for establishing connections and building community in her large human development and education lecture classes. On the first day of her class she left time for students to write her a letter sharing something about themselves, including anything they felt she should know, and why they are taking the course. Stopping there would have at least let students feel better known by the leader of the class, but she went further by weaving non-controversial information she learned from those letters into her lectures throughout the course, as a matter of relevance, as a means to reduce anonymity, as a way to show them each attention, and, in essence, as a method of introducing students to each other.

Addressing Face Needs

The common expression of “saving face” pertains to people typically not wanting to look stupid or incompetent in front of others, thus taking steps to avoid it even if they did do something stupid or incompetent or taking steps on behalf of others to help save them such embarrassment (see Goffman, 1955, 1959). Thus, beyond introducing students to content on Day One, some instructors aim on the first day to build student self-efficacy. For instance, Gaffney and Whitaker (2015) explicitly set out to address “face” needs of students by fostering a supportive learning community on the first day of their physics courses with the intention to make students feel competent and included. Sometimes the concerns with face are very evident and tied to the class content, like when a professor helps students reduce fears around speech anxiety on the first day of a public speaking class (Pulaski, 2007), and other times they are more diffuse, like when a professor of German aims to create enthusiasm for the language and culture in such a way that intentionally allows the students to see themselves as able learners with existing knowledge and skill upon which to draw (Bjornstad, 2004).

Setting Expectations / Increasing Motivation

Whether one uses a primarily content-based approach that is student-centered or teacher-centered, another facet to consider is what behaviors one is modeling and hopes to instill in the students starting from Day One. Using the first day to engage students in some of the behaviors they will be employing to accomplish semester goals, rather than waiting until

later, makes good use of the time and helps set expectations for the course and, in some cases, for the field in which they might later work. For example, if one wants question-and-answer as part of each class day in a lecture class, then pose questions and/or take questions to create such interactions on Day One. If one intends students to interact with one another, then the professor can provide an opportunity to do so on the first day, as well as explicitly model the attitudes and behaviors that he or she wants to govern those interactions. For instance, one might point out what *ad hominem* criticisms are and that they won't be accepted as a basis of argument in this class. Or if making the students more comfortable asking empathetic questions is a goal—for the class and to underscore the importance of it for certain professional settings—then one can model empathetic questioning in relation to course expectations on the first day. Empathetic questioning has been shown to help patients feel more comfortable during attempts to elicit important information, as medical faculty have demonstrated on the first day of clinical training with new M.D.s dealing with real patients (Hoch, 1993).

Some teachers use popular culture to situate the course while setting expectations for the class in general and modeling or pointing out useful behaviors. For instance, Koval (2013) reports that 91.6 percent of his sample was more interested in the course, and all reported to understand the class expectations better, after his first day role-playing and problem-solving activity based on the television show called *24* that works for his legal environment class. Other professors capitalize on the performance aspect of teaching, for at least part of the first class, to highlight that students also have expectations beyond those the professor sets. For example, Johnson (1996), an English teacher, entered and started class three different ways on the first day—as a demanding former Marine, as an “anything goes” Valley Girl (a stereotype of southern California youth that started in the 1980s), and as a well-intentioned, pragmatic professor—to engender discussion on expectations. Similarly, a botanist chose to start his courses wearing full academic regalia to drive home points he made, through a combination of lecture and demonstration, about perspectives on education, research, credibility, and trust in a field, as well as how certain class behaviors build trust amongst classmates and with the professor (Ribbens, 2013).

One need not be a thespian to realize that thinking through one's performance on Day One can be helpful, as can be thinking of how to get the audience involved in the act. Whether based on short- or long-term experience with classes or anecdotal, qualitative, or more formal quantitative or experimental methods, evidence supports that better/positive first day experiences ripple through the course. For example,

Wilson and Wilson (2007) report a study in which the class is divided into two sections. Both sections are shown a 15.5 minute video of a professor covering information in the class syllabus. For the positive group the professor was friendly and spoke with emotion while for the negative group the professor covered the material avoiding emotional tone. Students shown the positive video reported higher motivation for the course and received significantly higher grades at the end of the term than the group that received the negative video. Similarly, Hermann and colleagues (2010) found that conducting a reciprocal interview technique during the first day resulted in students reporting having greater clarity regarding their course responsibilities and receiving more support from their instructor than students not receiving the technique. Of course, students will not typically realize that a professor who facilitates a thoughtful first day activity is doing so, in part, to help students with their grades or to earn more positive regard for themselves, but some activities make these intentions more clear. For instance, Gagnon (Sautter, Gagnon, & Mohr, 2007), a marketing and hospitality faculty member, relates first day activities that one might use for any class where the majors are considering pursuing a career in the field or the faculty member wishes to emphasize the value of a class. Gagnon anchors his and his students' success in class by starting with asking questions from the final exam and moving into what recruiters look for during job interviews. He also calculates with them how much per minute the students are paying to be in that class, and students are given an opportunity to interview him for his fitness to be their professor.

An All-Encompassing and Flexible First Day Activity for Any Discipline

The previous review provides evidence of the potential inherent in the first-class day, potential that should not be squandered. Any thoughtful attention paid to the first impressions made on Day One is better than reading the syllabus aloud and dismissing the class, but an activity that addresses many of the goals at once is better still. The exercise that is outlined below and detailed in the Appendix — the Three Boards Activity — is an “all of the above” approach to starting the semester off effectively. Relating to common first day goals discussed above, this activity allows for the interactive communication of basic course information and expectations while establishing interpersonal connections amongst the students and with the professor. Along the way it models behavior and it starts to address face needs as the students participating in a low-stakes activity on Day One can feel more efficacious about participating thereafter. It works for any discipline, in general, and

one part of it is especially well-suited to adapt to the content-specific needs of a given course. Overall, the students get what they need, including a strong sense of the professor's personality and standards. That, paired with the overall positive tone this activity sets, enhances classroom management.

In the sections that follow the Three Boards Activity is described in sufficient detail to allow the reader to understand the basics and to demonstrate how the activity meets the goals of a first day activity listed above. While the overview description here offers a clear presentation of the activity, it does not cover some of the details that are useful when actually using it, thus the script and process notes are in the Appendix in order to allow practitioners who use the activity in their classes to anticipate questions and avoid pitfalls that might arise. While the script and process notes offered in the Appendix are from a first-year honors seminar, capped at 21 students, it will explain how the same exercise is easily adaptable to much larger classes. Similarly, while this example class script is based on a course that the department faculty agreed must require frequent and substantive discussion from the students, and less than 30% of class time spent in lecture per class, it will be made clear how to adapt it to other class types, like to “lecture” classes. In terms of format, the outline is designed for face-to-face classes or hybrid classes that first meet in person, yet it can be adapted to synchronous online courses with relative ease and at least the concepts gleaned for asynchronous ones.

Three Boards Activity

During the activity, time is allowed for general comments, but not enough time that student attention drifts, then moves to the professor offering, one at a time, a specific prompt shown on the white or black board (or even a flip chart) to which the students will respond in turn around the room. There are ultimately three prompts done in turn, hence the “Three Boards Activity.” The students respond to each prompt in a whip-like fashion—offering only a word or two, not long comments—while their responses are written on the board. In a smaller class, of up to about 30 students, all students can participate to each prompt for the boards. After that there is a diminishing return of shared information, or it may be too time-consuming for all to participate, especially if it is a 50-minute class. Therefore, in a larger class it is preferable for only a sub-set of students to participate per prompt. A few different ways for selecting sub-sets effectively are detailed in the Appendix. The first prompt is about their concerns, which gets many of the students' fears and negative assumptions expressed. The second prompt elicits their hopes, goals, or intentions, which turns the focus to what is possible to learn in class in

terms of content and/or process. The professor can then use what the students generated on these two boards to share with them a fair amount of information typically found in a syllabus, as well as clarify what they meant, and set aside or emphasize the reality of certain concerns while modeling a positive attitude and promoting good communication skills (paraphrasing, asking clarifying questions, etc.).

While the first two prompts apply well across any type of course, the third prompt can adjust to the specific needs of the class. The script in the Appendix demonstrates using this prompt with a seminar-style class, so the prompt invites students' ideas about what makes for an effective group discussion community. If one is teaching a lab class instead, the third prompt might ask what they consider safe lab behaviors. If one is teaching a class on research methods, one might prompt for what skills, ethics, or mindsets they think are useful in that endeavor, etc. Whatever context is set—whether effective discussion guidelines, lab practices, or something else—the professor can then process with the class what is reflected on the board and offer affirmative responses, like, “Yes, this is indeed important,” where appropriate, or offer corrections, deletions, and additions when a problematic item has been offered or something important has been omitted. These corrections can be handled either by fiat or by asking questions to facilitate thinking and discussion to lead to the best answer. Regardless of what one chooses to do with the last prompt/board, it is another opportunity to address class expectations and/or course content in an interactive way while attending to some of the face needs of students as they build their confidence and sense of inclusion in the class.

It is evident, then, that this activity, or variants thereof, can allow the professor to address a wide range of recommended first-day goals through communicating expectations, acknowledging common concerns and uncovering students' intrinsic motivations. In addition, if done with reasonable sensitivity and a neutral to positive tone, it can address face needs and build relationships. Content, key skills, or awareness related to the course can be communicated while facilitating all of the boards and most clearly in regard to the third board, depending on how one adapts the prompt(s). People learn by doing (Hackathorn, Solomon, Blankmeyer, Tennial, & Garczynski, 2011), so selecting a prompt relevant to what the students will be doing in the class, or career related to the field, is most useful. In the context of the overview offered above, and related to the example script in the Appendix, for a discussion-based seminar course it is especially useful to get students speaking on the first day to underscore the expectation for that and build their belief in their ability to do so. Regardless of whether one teaches a large or small lecture course, in any discipline, this exercise works well, in part, because it goes quickly,

without turning the class time over to groups or pairs, as it is often most useful for the teacher to still “hold the reins” at the start to be sure key information is conveyed on the all-important first day.

Discussion

The Three Boards Activity can aid in setting the students up well for a successful experience in class and can ease or eliminate classroom management issues. Having done this activity in almost every class I have taught in person (and variants online) in traditional disciplines and interdisciplinary classes of different levels and sizes for two decades, I can attest to its utility in creating an atmosphere that inclines students toward attentive, on-task, cooperative behavior and toward evidence-based and respectful participation. For instance, in a reciprocal college mentoring program at my institution, one colleague visited my classroom much earlier than typical—in Week 2 of class—and reported being stunned that the class was already performing at a level that he found it usually takes professors half the term to build. I credit that to a successful Day One and immediate and continued modeling from there forward to support their reaching the high bars set for them, which is a benefit to them, certainly, but also makes it such that serious classroom management issues or grade disputes are minimized, which is a benefit to the faculty member and administrators.

Doing an activity like this does require letting go of some control and a fair amount of thinking on one's feet as one solicits and processes the board comments, but control is maintained by redirecting all comments to one's pedagogical ends, and the information shared in response to student comments comes naturally as it is a more fluid version of what used to be “scripted” and read aloud from the syllabus. This activity also allows the students to see the professor's personality, get a sense of how difficult the course will be, understand class standards, and learn some tips for success—all matters students report wanting some information about on Day One (Bassett & Nix, 2011). Whether the students like what they see or not cannot be predicted, but at least they are clearer on who and what stands before them. Additionally, this activity builds a kind of camaraderie that can be useful to refer back to on those days when student behavior is a little off-track or their engagement is waning. Similarly, referring back to the concerns, hopes, and class guidelines the students generated can help make certain points, establish continuity, or offer an opportunity for reflection. For instance, it can help the students see how much they've grown during the semester. In sum, whether or not one tries *this* activity, careful thought about what occurs on Day One is for the benefit of the students and faculty alike.

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Appendix
Cracking the Whip: The Three Boards Activity

Sample Script, Rough Timing, and Process Notes

Pre-Class Emails

I email students twice before classes start, typically once seven to ten days ahead and once three days in advance of class, reminding them what to get from the bookstore, and that Day One matters so I look forward to seeing them then. Legg and Wilson (2009) found that an email from the professor one week in advance of class enhances student motivation and attitudes and aids in retention. In my experience, the email allows for less time to be spent on the first day on anything mentioned in the email.

Day One Welcome

Script: 00– 01 minute

Welcome to _____ (class). I'm Dr. _____. If you are in the wrong class, let me help you get to the right place. If you are where you belong, please join me in turning off your cell phones, laptops, smart watches, Google glasses, etc., and put them away. We'll need to focus on the material and each other in the 1 hour and 15 minutes we have together twice a week, so we'll not have out devices that can be a distraction to you or others. You won't need to worry about time either, as I will keep my phone out to keep track of time when I don't wear a watch or when the wall clock is incorrect.

Process Notes: In terms of manner and tone, I maintain a professional distance but aim to be approachable and “human.” No matter my mood, I make an effort—especially on the first day—to present myself with an interested expression, something of a smile on my face, and some positive energy in my voice.

Adaptation for a Large Class: Even in large classes I ask for items to be put away and set the expectation for undivided attention. If one needs or allows students to use such devices in class on other days, I recommend that they be required to put them away at least on *Day One* so they participate fully in this activity.

Roll-call

Script: 02- 04 minutes

If you prefer to be called by a variant of your name, or a different name altogether, please let me know. If you prefer we use a different gender pronoun for you feel free to let me know publicly now or privately later.

Process Notes: I pay attention during roll call and make an effort to encode their names in my mind. I then try to use their names during the coming board exercises to model that I expect them to as well. I ask that they correct any inaccurate attempts and I point out that this demonstrates that it is okay to be wrong in class and we'll help each other get it right.

Adaptation for a Large Class: For unusually large lecture classes, one might not have the time or inclination to do a verbal roll-call. But class lengths vary so it still might be do-able that once to help reduce the feeling of anonymity students in large classes might feel, plus the professor can at least begin to learn a few names or at least better recognize the faces of the students. One could consider the pros and cons for their particular class and students and adjust the length of time spent on one or more of the boards, as discussed below, as well. At the very least, however, I do recommend some form of roll be taken via perhaps collecting an information sheet to learn about them as individuals, or, more minimally, a sheet asking for their printed name and signature can be passed around to later compare to the roster. Some sort of accountability for being there sets the stage that attendance matters.

Opening Overview

Script: 05 – 10 minutes

Professors will vary in what they do the first day of class. Some will read you the syllabus—or just hand it to you—and dismiss class. In this class we'll go over some of the standard syllabus information but we won't do it that way. You are in college now so I trust you can and will take the initiative to read the syllabus. You should do that in all your classes to know what you are getting into, to put due dates in your calendar and such.

Thus, I assign and expect you to read the syllabus online and ask me questions at the next class if you have them. To help ensure you do read the syllabus, a syllabus quiz is due online the night before our next class meets. You'll also do a brief discussion board post to acknowledge that you read the participation guidelines and have identified a good habit you have as well as set a goal for an area in which you want to improve. What you put into the class is what you'll get out of it.

Before we part ways today, you'll know the books for class, have your reading for next time, and have an initial sense of the class, expectations, etc., as we use the white boards to generate three sets of items about which we will talk.

Process Notes: I briefly review the books they'll need, their cost, whether or not I expect physical books or accept e-book usage, etc., and emphasize that they will indeed need to do the readings and can't get by on just coming to class and listening.

Course Overview

Script and Process Abstract: 11-17 minutes

I introduce the teaching assistant (s) with respect and a sense of humor, and remind them where to find our office hours, show examples of a key, on-going assignment for my class to anticipate questions I have learned are typically asked about it. And I explain the interdisciplinary nature of the class. For instance I point out some of the big, enduring questions we will engage, or I ask them to offer what some of those questions might be, and share why it will be useful to their academic, civic, and professional futures, or to their existence as human beings.

Concerns / Worries / Fears – Board 1

Script: 18 – 25 minutes

This course is discussion based and much of your final course grade will be based on participation so we will get the ball rolling by having you each speak briefly today, and along the way you will get to know each other a bit and we will touch on some syllabus-related items as we get you thinking and talking.

We'll start with your concerns. Perhaps you've heard a rumor about me, or are worried about the nature of the class, the college, or the field. Maybe you have some doubts or insecurities about your skills or foundation coming in here. So think about a worry, concern, or fear you have about this class or being in school this term, but I'm not looking for fears like of snakes, spiders, or heights! This isn't a group therapy session.

We're going to do a "whip" around the room, meaning we'll just quickly move from one person to the next for a word or two to write on the board. A whip moves fast...meaning we don't need your life story, a paragraph, or even a sentence. Ideally, I just want a word or two that will help us create a bullet-point list on the board. So when we get to you, please state a concern, fear, or worry. Please don't just echo each other...you won't do well in this class if you just say "I agree" or "that too" so if you have the same fear, think of another or dig deeper to get at a different aspect. Let's start with you.

Process Notes: As they call out concerns I write the words or phrases on the board under a header called "concerns, worries, fears." I don't address the worries as they call them out unless it is to shape them toward the kind of concerns appropriate to the task. I just write on the board as quickly as I can, usually repeating what they said verbatim or in my own words. I sometimes turn to the room to keep an eye on them, otherwise I might keep my back to them much of the time and just say "thank you" and "next" and keep writing.

I might occasionally pause and ask “do you mean x or y?” to clarify but, depending on what it is, it can be better to wait until everyone has had their turn to reduce distraction or accidentally stealing someone else’s reason. Whether I ask a question immediately or wait, I model polite inquiry and paraphrasing, which I point out at some point in the class as skills they’ll want to practice and use in this course.

If a student says “I have no concerns” I say something like, “That’s good, but it is unusual...so dig deeper, think more widely, and I’ll come back to you.” Then I move on and come back to them after every 2 or 3 students until they offer something. I don’t let them off the hook too easily as, again, I’m setting the expectation that they will need to find a way to contribute.

Similarly, if a student says “I have that same concern” or offers something essentially the same as what someone else said, the first time I usually underline the word/phrase I had put up there before and say, “So we see this is a shared concern, okay, yet let’s not have too much simple repetition as there are plenty of potential concerns to think about as you enter a new class or endeavor.” Then I move on. I discourage repetition by reminding them that they probably have something else on their list or, if it happens more than once, by saying what I do to the “no concerns” student about coming back to them. It depends on where we are in the whip (it is harder to come up with unique concerns the longer the whip) and the tone/attitude with which they offer their comment. Is it genuine blank-minded repetition? Or are they being truculent somehow? I politely deal with either to set the expectation of them needing to “step it up” in this class. I remind them that in a discussion class saying “what she said” isn’t usually enough to do well, so while it might be okay today it won’t be going forward. While I don’t necessarily want them to manufacture concerns, I do want them to think more widely about themselves or imagine what could become a concern for them or someone else.

Adaptation for a Large Class: When considering this procedure for use in a large lecture class, or even in a class over 25 or 30 people, there is a point of diminishing returns in trying to have each student participate on each board as there are only so many concerns, hopes, etc. to bring up, and if there is a shorter class period it might not be prudent to attempt to have all students participate on each board. A simple adaptation involving sampling the class for responses permits the three boards to be completed for even large lecture classes. Even though each student might not verbally participate in each of the boards they will be attending to what the other students offer.

For instance, a reasonable choice would be to start the whip with X number of seats/rows in a large class and after a portion of the class has participated—perhaps a third of the class, or maybe only 20 students or so, or whenever fresh ideas seem less forthcoming—then stop work on that board. Introduce the second board and continue the whip from the cut point (or start at the other end of the class, to keep them alert) with the next X rows/students contributing to it, stopping again at a set or intuited point. Finally, proceed through the room as the next X rows/students offer content for the third board. Alternatively, after each board one could ask if anyone (not in order of the whip) wants to offer another idea that isn’t already represented on that board before moving forward. Or pose that question after processing all the boards.

Goals / Hopes / Intentions – Board 2

Script: 26 – 33 minutes

I’ll address many of the concerns you mentioned in a few minutes and we’ll see if these fears match up to reality, but let’s first think about that you are in school and in this class for a reason. What do you hope to get out of it?

Whether a class is required or not required, you put yourself here by choosing to some degree or another this major, this experience, this class, time, day, and teacher. If you don’t want to be here, then consider why you are in attendance. If you don’t want to take a required class, consider why it is required and get into the spirit of that—or consider changing majors. I wish for you a good fit and a lot of that is up to you. If you are going to spend your time on something you might as well make it a worthwhile experience for yourself, right? Take responsibility for your actions and learning.

So regardless of why you are here, remember we aren’t fully formed, perfectly able and wise people coming out of high school or college...and, trust me, I’m not either as I’m learning and improving all the time. So please think about what you hope to learn about content or process, about yourself, life, or

whatever in this class. What is a skill, hope, target, goal, intention—pick your favorite word—that you have for the time you’ll spend in this class?

Let’s reverse the whip and start with you where we ended last time...what do you hope to get out of this class experience?

Process Notes: As before, I write down what they offer. I tend to comment on these a bit more along the way, offering in encouraging ways how that might happen in the class, but, in general, I don’t get off track. Also, what I say might come off as “harsh” when read in print but the tone in which I deliver it is “matter of fact” and more friendly than harsh, though one can never predict how any one student will interpret it.

Processing Boards 1 and 2 to Discuss Course Expectations, Policies, and More.

Script: 34 - 44 minutes

Before we move on, to our last board let’s go over some of what’s on these two boards. Let’s see...

Let’s start with concerns about papers...So what do you consider a ‘long or difficult paper’? What number of pages or words? [Student(s) answer.] Oh, well, good news...by your standard the papers aren’t that long! They typically are _____. But in terms of “difficult” that’s subjective as that has to do with your understanding of the material and effort. Of course you will hopefully be challenged by them — as you are in college to stretch yourself, learn, build new skills — but the papers are manageable. And, by the way, if you don’t know this already, sometimes a shorter paper is harder to write than a long one as you must write tightly and can’t ramble on or use filler, or the like.

I see there are worries about grades in general or how I grade in particular. I don’t force a curve on individual assignments or the final course grades so, yes, you all can earn an “A” if your work is truly excellent. You all have the potential for excellence but, in my experience, you may not all, for whatever reasons, earn A grades.

Either way, it is healthy to remember that getting an education should be more about learning and improving skills rather than over-focusing on grades. If you focus on the learning—if you really apply yourself to the material and instructions and use the ample resources available to help you—the grades tend to take care of themselves. While you may have a preference, it doesn’t really matter whether a professor uses letter grades or a point system, just remember that the grades aren’t about YOU but are assessments of work you offered in that class. That is, don’t take grades personally but rather as feedback on where to learn more, study/work differently, etc. as you grow.

Process Notes: As demonstrated in the script example, I use what is put on the two boards as fodder to clarify expectations, introduce tips for success, and point out traps to avoid. I ask more detailed questions and/or offer perspectives on what’s there, as well as make statements about attitudes and behaviors that are more or less helpful. This is where I weave in additional information from the syllabus or general expectations. Clearly, what comes up for your class may be different depending on your course or student body composition. Some concerns and hopes may surprise you but they generally clump together in predictable themes so you can address several at once.

Ignoring or deferring some stated concerns is alright as not everything the students bring up is germane to the course, their academic success, or general well-being. If something is particularly off-target, personal, or complex, it is reasonable to not comment on it or say “Let’s talk about this one after class.” Similarly, one needn’t feel obligated to discuss every single concern or goal separately as if it were a to-do list. If after spending the allotted time to handling the primary concerns — and introducing any ideas the students didn’t offer but should consider — one can say something like: “Let’s move on for now but if there are still questions at the end of class, I’ll answer a few then if time allows, or you can jot them down to remember to see if they are answered by the syllabus. They likely will be but if not, or if you need clarification, you can ask me at our next class.” There rarely are any more questions.

While some student concerns are shared across any type of class, what any given professor brings up or emphasizes will vary but the format of this exercise allows a wide range of expected and unexpected concerns to arise that helps professors and students better understand each other.

Community-Creation and Discussion Guidelines – Board 3

Script: 45-60 minutes

We've addressed some individual concerns and intentions but let's go in a new direction now and think about our class as a community instead of only ourselves. As this is a discussion-based class, our goal is for interesting and meaningful class discussions that are polite, productive, and evidence-based as we build our understanding of the texts.

One can look at how some behave in the media or on talk shows to see how rapidly discussions can disintegrate, so it is important to learn how to engage in civil discourse, disagree in agreeable ways, and operate from a spirit of inquiry. In this class I want you thinking about building bridges of understanding, not walls of arrogant self-righteousness.

So let's generate ideas about what helps make for a healthy discussion community from your perspective...let's do the whip around the room again and have you offer what helps create a safe and productive environment. Let me see where you are with this and then I'll clarify what works well and what I'd like to see in this particular class.

Process Notes: I then reverse the whip again, starting with the person I left off with before and the students offer their thoughts. I usually write these down with no comment and process them once all have contributed, but it can also work to make a few brief confirming comments or clarifying remarks as I write before stepping back to consider the board as a whole.

The key is to get the students thinking, and hear what they have to say and then shape what you want to see happen in the class. In this exercise I am not suggesting that what students offer be unequivocally used as a contract for the ground rules for the class as some faculty might. Sometimes they come up with off-target ideas or leave out key behaviors one seeks to see in class, but doing this board allows a less lecture-like way to point out what you seek and give the students some credit for some ideas, which can increase their confidence and motivation. At the same time, there is the opportunity to politely say “no” to some ideas, like “Thanks for bringing that up, but while that would be good in some classes in this one aim for more ____.” As with the first two boards, I look for patterns and gaps and comment on those. I also have in mind things I will typically mention regardless of what shows up on the board—though they usually do offer something that allows me to anchor my key items to theirs.

Some typical things I bring up include making any number of subtle or not-so-subtle distinctions. For instance, there is a fine line between being confident and cocky. I point out this is a discussion class not a debate class. Disagreement is okay, and even encouraged, to help get to better understanding, but tone and intention matters. I remind them that while I do expect them to contribute to each class, good participation isn't always about quantity or speaking more than others as much as it is about the quality of content. It isn't about winning or competition but about building understanding and getting clear on, for instance, what a text means or the concept the author would want the reader to leave with rather than what a student wants to twist it into. I point out it is not an opinion-based class, though some might enter in, because while everyone has an opinion not all opinions are equally valid, thus we'll go to the text for evidence to support assertions. I encourage them to assume the best of each other. That, yes, in the heat of a discussion someone might unintentionally hurt feelings so we should learn how to handle that with grace, and while we aim to be kind to each other we would do well to learn how to “thicken” our skin too and not always react or over-react.

Note: I typically spend the last 15 minutes of a 75 minute Day One (so minutes 61-75 if this script example were to continue), in a name-learning activity with the students. I flex on this, though, sometimes saving it for Day Two, in the event I ran long on any of the three boards.

Adaptation for Content-Specific Concerns: Naturally, if the class being considered for this first day activity is not a discussion-based seminar then simply adapt the third board to the topic/prompts that is more relevant to that class. For instance, one might ask for a student-generated list of lab safety rules, research skills, ethics, active listening skills, or whatever topic fits with ground rules or guidelines needing to be established for that class. The exercise provides a forum for active interaction to confirm and correct rather than lecture about rules and reminders.

Similarly, one might still desire/expect participation in a lecture course, so one could generate a board about that or how to stay attentive in class or how to prepare for some assignment that is critical to

the class (like a portfolio show at the end of an architecture or design course about which students commonly worry from Day One) or how to engage in effective group projects (if there is one).

Alternatively, in a given class a professor may prefer to do only one or two of the three boards, depending on their content and time constraints. The concerns/hopes boards could also be combined as one, asking students to offer one or the other to comprise that one board.

Adaptation for Nervous Students: If one is concerned that the students in a given class will be too shy or timid to readily participate it can be helpful to have the students briefly write something down in response to at least the first of the three prompts you plan to use for the activity. It is best to do this before they know it will be something they offer aloud so they don't over-edit themselves at the start, especially since everyone except the first couple of students can still edit themselves while the activity proceeds.

For instance, I usually distribute a sheet of paper to collect basic information from students to help me know them better. (I ask about their favorite and most recent book and movie, where they went to high school, favorite class, major, current career hopes, etc.) While sometimes I have them complete that outside class, they usually fill it out while they wait for class to start though I don't collect them until the end. Thus, if I get a sense that a class seems on the quiet side, I sometimes have the students turn that sheet over and write their concerns, worries, or fears on the back of that sheet before I say that we'll do the whip out loud to help them have something in mind already. Allowing that extra minute or two for them to write some thoughts down first somewhere (even if is on their own paper if you choose not to collect an information sheet) builds their confidence, which helps address face needs.

Similarly, there's no sure-fire way to know the best place to start the whip but logic and observation help determine it for each class and room arrangement. The general idea is to start at one end of the room/table or the other (or some "landmarked" place) in order to keep track of where you are in the whip. Usually it doesn't matter, but sometimes it is clear that there is a particularly shy person (not making eye contact as much, fidgeting) at one end and a more out-going person at the other, so that can influence the decision. Sometimes it is better to start with the shy people so they can "get it out of the way" yet sometimes it is better to start with a more out-going person so the shy person has a few minutes to pull him or herself together. That said, if students write a brief response to at least to the first board prompt, before knowing they'll be asked to share it, that will help support their idea generation so it will be more comfortable for even the shyest student.

The Classroom as Think Tank: Small Groups, Authentic Exercises, and Instructional Scaffolding in an Advanced Writing Course

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A recent (2015) study conducted by the Society of Human Resource Managers concluded that nearly half of US employers, across industries, believe recent college graduates to be lacking in requisite competencies for communication, broadly, and writing, in particular. This paper describes an advanced writing course in public relations that seeks to ameliorate this proficiency gap by using experiential learning modules, small group learning methods, authentic exercises, and instructional scaffolding techniques to improve student writing and promote workplace readiness. The module series, *Writer's Bootcamp*, is a short, intensive, and rigorous collaborative among students and instructor aimed at shaping independence and aptitude in writing. Authentic exercises, derived from real-time, real-world situations, were assigned. Students in small groups worked together to appropriate the piece (from the PR Toolbox, a collection of trade writing), collaboratively script, and present a response in thirty minutes. An assessment of learning outcomes involving the programmatic writing rubric, critical incident reports (verbal), and a reflection instrument (written) indicates the Bootcamp as engaging, gratifying, and transformative by students. Limitations are discussed followed by implications for teaching and learning in upper-level, pre-professional writing courses.

An advanced writing course in the College of Arts, Communications, and Design is requisite for public relations majors at a midsize, private university in New York. The curriculum requires intermediate proficiency in writing as a starting point, as demonstrated by the satisfactory completion of its prerequisite, *Writing for Public Relations I*. Learning objectives in the advanced course emphasize both on-the-spot writing and the application of strategic thinking to written communication. The duplicitous nature of this aim – to help foster a quick, agile written response, as well as cultivate a cogitative, tactical capacity for writing – can pose a problem for instructors.

In the field of public relations, there is voluntary accreditation; however, the profession does not require a license to practice in America as in other fields (e.g., medicine, law, real estate, and accounting). Scholars, therefore, keep a close eye on practitioners' requirements to ensure that their students are adequately prepared for the workplace. Evidence from the profession, however, suggests a marked deficiency in communicative competence (written and oral) among new graduates.

This study describes how student learning in an advanced writing course accelerated when experiential learning modules in an active, small group format were introduced halfway through the semester (week seven). Students ($n=19$) enrolled in the course were third- and fourth-year matriculates in the public relations program (B.F.A. in Public Relations) and varied in age, gender and ethnicity.

To evaluate the efficacy of two distinct teaching modalities—lecture / discussion and active small groups / authentic exercises—student writing completed independently outside of class during weeks one through six was assessed at mid-term and measured

against writing completed collaboratively in class during weeks seven through twelve. Factors contributing to learning episodes were analyzed by the use of a programmatic grading rubric, verbal critical incident reports, instructional scaffolding, and written reflective exercises. Evidences of student learning and improved writing aptitude were remarkable: on average up 1.5 letter grades from mid-term, as students engaged with each other and the real-time business situations with which they were tasked.

The Case for Communicative Competence

Despite academia's best efforts, there remains a gap in communication skills desired by business practitioners and those delivered by new graduates. Conrad and Newberry (2012) have suggested that this may be the result of practitioners demanding outcomes-based, functional skills and academics teaching the basic, formal fundamentals of communication. Although there is general agreement on the importance of business communication skills and on the need to include them in the business curriculum (Du-Babcock, 2006), growing evidence indicates a substantial number of inadequately prepared entry-level applicants in this area. A study by the Society for Human Resource Management (2015) identified the main deficiency in workplace readiness, across industries, to be communicative in nature: 49% of all human resource managers surveyed agree that oral and written communication skills are lacking, with 27% stating that applicants have insufficient skills in written communication and 22% citing ineptitude in verbal discourse.

A review of the literature reveals a slow-budding crisis in workforce preparedness when it comes to

writing for the business professions. Earlier studies (Society of Human Resource Management [SHRM], 2009; National Commission on Writing, 2004) have indicated that, while writing remains a “threshold skill” for hiring and promotion, less than one third of employees, current and new, possess the writing skills that their organizations value. Moreover, a significant number of firms reported that although the writing skills of new applicants (recent graduates) were generally considered unsatisfactory, few employers provided training in this area.

This gap between what is needed and what is provided in the world of business is further exacerbated in the realm of public relations. Specialization is growing, assert public relations professionals (Public Relations Society of America [PRSA], 2011), and while writing and research skills remain vital to the profession, today’s PR practitioner must wield the tools of both traditional and new media in order to communicate quickly and accurately to both broad global audiences and specific local constituencies (Neill & Lee, 2016). Content creation is in demand; and writing effective content—words which resonate with a specified target—is a highly valued skill. Industry leaders agree that “learning how to grapple with and capitalize on the new ways people create and consume content is the newest challenge in PR” (Greene, 2015, p. 5). The expanse and importance of public relations’ communication (e.g., media relations, online communications, integrative marketing, special events, product and brand messaging, crisis management, influencer communications, and community relations) underscores the need for academics and PR practitioners to collaborate in preparing public relations majors for the workplace. PR professionals spend a great deal of time communicating in a variety of forms, including face-to-face and written, and in a variety of media. The observation, understanding, and instruction of these key skills can improve the often-underrated art of communication, an art at the epicenter of every working day.

Literature in the fields of business communication and public relations practice recognizes the lack of preparedness of new graduates with respect to written communication skills, despite a consensus among practitioners and academics of those skills sets’ importance. Thus, based on recent emphasis of outcomes-based initiatives, I set out to provide structure to what was otherwise missing in the classroom. This resembled a cooperative think tank environment and involved a writing curriculum designed to teach effective organizational behavior, interpersonal relationships, work processes, and communicative competence.

Theoretical Framework

Revisions to the advanced writing curriculum, introduced in week seven, integrated small group learning methods, authentic exercises, and instructional scaffolding.

Characteristics of Small Group Learning

Small group learning (SGL) is a learning method that places students at the center of the learning process, allowing them to negotiate meanings, express themselves in the language of the subject, and establish more familiar contact with instructors than formal lecture methods permit (Borůvková & Emanovsky, 2016). A small group structure in the classroom often works to help distribute the cognitive load among the members of the group, taking advantage of students’ distributed expertise by allowing the whole group to tackle problems that would normally be too difficult for each student alone (Lange & Costley, 2014). Working in groups, students identify what they already know, what they need to know, and how and where to access new information that may lead to a solution to the problem (Lewis & Dehler, 2000). The role of instructor, then, is to facilitate learning by supporting, guiding, and monitoring this process. SGL is a common technique in collegiate instruction, and allows for several specific non-traditional learning contexts to develop within it, including problem-based, project-based, cooperative, collaborative, or inquiry-based learning. Collaborative problem-solving groups are a key feature in the advanced writing course.

O’Donnell submits that collaborative learning is an instructional context whereby peers work together on a task with the goal of all participants benefiting. (O’Donnell, 2002). Over fifty years of research support the premise that when students are active in collaboratively facilitating their own understanding, learning outcomes improve (Barkley, Cross, & Major, 2014). Furthermore, it has been demonstrated in the literature that students who learn together in small groups exhibit higher academic achievement, motivation, and satisfaction than those who do not (Schrader, 2015). Cognitive and affective outcomes associated with collaborative learning environments and shared learning goals necessarily depend on the quality of student interaction (Rocca, 2010) and the levels in which students are actively engaged in the building of their own minds (Barkley et al., 2005).

Social interdependence theory, too, suggests that through a shared goal, teams learn to work together for the benefit of the group (Lee, 2016). In other words, an individual learns better with a peer because the peer provides an audience, prompts metacognition, and helps to maintain an individual’s focus on a task. The benefits associated with this kind of learning include a mastery of content and improved critical thinking, problem solving, and interpersonal skills (Johnson & Johnson, 1999; Johnson, Johnson, & Smith, 2010). Learning is facilitated when group members strive to motivate and support each other. These cooperative efforts, collectively known as “promotive interaction” (p. 5),

are an essential element of the collaborative learning process (Johnson & Johnson, 1999). Thus, working with others to solve a common problem, explain one's viewpoint, and engage in co-creative activity are strategies that build strong cognitive and interpersonal connections. Learner-to-learner relationships are at the heart of the advanced writing course in public relations and draw from both David Johnson's work (Johnson, 2003) on social interdependence theory and Norah McRae's discourse (McRae, 2015) on transformational learning in work-integrated tasks.

Educational psychology scholar David Johnson (University of Minnesota, professor emeritus) described the appropriate use of cooperative, competitive, and individualistic learning as pedagogy to build a collaborative community in the classroom, and suggested inter-class interdependence by organizing students into "neighborhoods" (Johnson, 2003). A stimulating environment that promotes participatory, neighborly exchange in the classroom can make quite an impact on the undergraduate student. There is ample testimony in the literature (Barkley et al., 2014; Bowen, 2011; Bush, 2009; Rocca, 2010) to suggest that this type of participation leads to high-quality, supportive learning environments where engagement, motivation, and learning are more likely to be achieved. Rocca (2010), for example, reported myriad benefits, including bringing a sense of life to the classroom, higher levels of motivation and critical thinking, self-reported gains in character, less memorization and more interpretation, and demonstrative improvements in oral and written work. McRae (2015), too, observed the transformative potential of social relationships in the classroom to assert that, "taking a sociocultural view provides a broad scope for considering how transformational learning occurs" (p. 142). McRae's (2015) examination of transformational learning expanded upon Johnson's work to include work-integrated learning, a form of experiential learning, which intentionally connects the education of students to the world of work by partnering academic institutions, workplaces, and students.

Covill (2011) pointed out that "while researchers continue to explore the relative merits of lectures versus active learning methods, many educators continue to view active learning as superior to lecturing" (p. 93). While it is true that traditional lecture methods are sometimes preferred by students, e.g., students using memorization as a learning strategy and preferring a discourse that "enables them to listen passively, organizes the subject matter for them, and prepares them well for tests" (McKeachie, 1997, p. 1219), it appears that the instructional format often depends on the content area being taught. Advanced writing, conducted in the context of peer collaboration, peer editing, and authentic exercise, seemed to naturally fit

within an experiential learning format rather than that of traditional lecture.

Based on Vygotsky's (1978) zone of proximal development, the active small groups also serve to aid students in learning beyond what their abilities would allow them to do on their own in order to reach a higher level of knowledge. As Schrader (2015) explains, "[T]he zone of proximal development is the difference between what the knower can do on her own and what can be done with assistance" (p. 25). An assessment of outcomes indicated that the small group format - collaborative, co-creative and derivative of social interdependence theory - helped to narrow this zone considerably.

Authentic Exercises

Until recently, few authors have attempted to define authentic learning and its components. In a general sense, authentic learning can be seen as learning through applying knowledge in real-life contexts and situations. Callison and Lamb (2004) placed authentic learning at the intersection of workplace problem, personal interest, and academic exercise. Maina (2004) identified three key elements of authentic exercise: activities mimic real-world situations, learning takes place in meaningful situations which are extensions of the learner's world, and the learner is at the center of instruction. Four themes supporting authentic learning, outlined by Rule (2006), help to clarify its components:

1. An activity that involves real-world problems and mimics the work of professionals
2. The use of open-ended inquiry and metacognition
3. Small groups; student self-directed learning in community
4. A presentation of findings to audiences beyond the learning community

In authentic learning environments, students are the inquirers, rather than note takers; and instructors are mentors, or procurers of resources, rather than lecturers.

An EDUCAUSE Learning Initiative conducted by Lombardi (2007) examined possible outcomes of authentic exercises. In this study, student teams were assigned authentic learning activities designed to cultivate the kinds of portable skills that newcomers to any discipline typically have difficulty acquiring on their own: the judgment to distinguish reliable from unreliable information, the patience to follow longer arguments, the ability to recognize relevant patterns in unfamiliar contexts, and the flexibility to work across disciplinary and cultural boundaries in order to generate innovative solutions (p. 3). Lombardi discovered that authenticity

allowed for real-world relevance, collaboration, reflection, and practical output in measurable terms.

Student Readiness and Instructional Scaffolding

Wood, Bruner and Ross (1976) introduce scaffolding as a “process that enables the novice to solve a problem, carry out a task, or achieve a goal which would be beyond his unassisted efforts” (p. 90). Within the context of small groups and authentic exercises, I sought to increase participation by developing scaffolding strategies based on Donato’s (2000) definition of scaffolding, which recommends that teachers scaffold the learning experience by shaping the discussion to achieve goals of specific tasks and to activate the background knowledge of students.

In the context of student writing, some research (Gully, 2012) supports the idea that instructional scaffolding is preferred by students over a professor’s edited comments on papers. Gully opened her discussion on feedback on developmental writing with researcher, Nancy Sommer’s, discovery that when asked what they thought about faculty feedback on their writing, students suggested that teachers’ written comments on their papers “demoralized them” and “made them feel like they don’t belong in college” (p. 16). Sommers (1982) submits that “our teachers need to offer students revision tasks of a different order of complexity and sophistication from the ones they themselves identify, by forcing students back into the chaos, back to the point where they are shaping and restructuring their meaning” (p. 154). Linking participation with scaffolding has been a focus of research in the recent years, specifically involving mobile learning technologies. The issue of student readiness was apparent in the advanced writing course, and scaffolding techniques were trialed with the understanding that the use of open-ended and follow-up questions can lead to more “substantial and elaborate” (p. 42) answers from the students (Heinonen & Lennartson-Hokkanen, 2015).

Instructional scaffolding infused the second half of the semester in the form of authentic exercises and student conferencing.

Method

This study meets the guidelines, and was conducted under the approval of, the Institutional Review Board of Long Island University. It was delivered in spring 2015 in the author’s undergraduate *Advanced Writing in Public Relations* class. This class is a third-year university course designed for majors, although it is open to all students within the College of Arts, Communications and Design. The course is not required for matriculation (B.F.A. in Public

Relations), and is populated with juniors and seniors who have taken and passed its prerequisite, *Writing for Public Relations I*.

The advanced writing curriculum traditionally covers aspects relating to writing effective copy in a variety of formats and for a variety of audience. A traditional lecture and discussion format was supplanted in week seven of the semester by an experiential learning module incorporating active small groups, authentic exercises, and instructional scaffolding into the syllabus in order to improve student writing and promote workplace readiness. The module series, *Writer’s Bootcamp*, was a short, intensive, and rigorous collaborative among students and instructor aimed at shaping independence and aptitude in PR writing. Authentic exercises, derived from real-time, real-world situations, were assigned. Students in small groups worked together to appropriate the trade tool (from the *PR Toolbox*, a collection of professional trade writing), collaboratively script, and present a response in thirty minutes.

The Experiential Module: Writer’s Bootcamp

If experiential learning is the process of knowledge acquisition through hands-on experience (Vadeboncoeur, 2002), then *Writer’s Bootcamp* is an all-hands-on-deck experience where everyone’s help is needed, especially to do a lot of work in a short amount of time.

During the first half of the semester, students worked individually and out of class on writing assignments aligned with lectures. Content focused on a writing stratagem and communication processes and applications commonly used in public relations (e.g., blogs, leads, headlines, press releases, backgrounders, media alerts, and public service announcements). The instructor provided lecture time for class discussion on the writing process and best practices in the field of PR. Written feedback was provided each learner on each assignment. Careful review of student writing at week five in the semester concluded that students, on the whole, were unprepared for an advanced writing course. The instructional approach of lecture, writing templates, style guides, and individual in-class writing were largely devoid of engagement and poor grades reflected this. In fact, students’ progress seemed to be tethered to the professor’s edits and suggestions rather than self-directed. Students were not actively learning the techniques of writing, nor were they turning in work that they were proud of. It was important to take cues from the class to reassess their readiness and capacity to succeed in this advanced-level course.

The syllabus was reformatted mid-semester using an experiential framework called *Writer’s Bootcamp*. A writing workshop method, developed from the work of Donald Graves (1994), required that the students write for a variety of audiences and purposes. This method of instruction focused on the goal of promoting

the development of lifelong writers. Added under the moniker of Writer's Bootcamp, each remaining lecture (from week seven) ended in an authentic exercise designed to spur student engagement, stimulate learning, and improve writing proficiency.

The instructional redesign was informed by the work of Lewis and Dehler (2000): "[R]ather than providing students with well-defined problems with clear solutions, the instructor serves as a facilitator, fostering creative tension and opportunities for students to critique and rethink oversimplified concepts, assumptions, and issues and develop more complicated and insightful understandings" (p. 713). In *Writer's Bootcamp*, active small groups of three or four students were tasked to effectively appropriate a specific PR tool and then collectively write and edit a response to a unique, authentic case presented at the beginning of each lecture.

This method carried through the duration of the course and allowed students to engage in, and take ownership of, each writing assignment. Assignments began with a briefing on a specific, real-time public relations initiative at a recognizable company. The pedagogical considerations for Writer's Bootcamp, described below, build upon the other to create, and ultimately fulfill, the expectation of writing proficiency in the public relations profession.

The nature of college writing. It was imperative that students were provided with a renewed focus. Although students enrolled in the advanced writing course had demonstrated adequate writing proficiency in its curricular prerequisite, it was possible that acquired and newly acquired skills were not adapted to new kinds of tasks in the advanced course. Melzer's (2014) examination of types of transfer: positive versus negative, threshold concepts, low road versus high road, metacognition, near versus far, and vertical transfer allows us to better understand, leverage, and build toward disciplinary expertise in the field of Public Relations writing. For example, if the student practiced metacognition in the prerequisite course, she would have built in "moments of self-reflection to core writing requirements" thus providing awareness in her transfer to "more complex issues." (p. 83). Melzer proposes a vertical writing transfer curriculum principle to "focus on situated, authentic, domain-specific practice as transfer is more likely to occur when learning is authentic and connected to disciplinary and professional practice" (p. 84). It was not just a matter of higher standards: the instructors of PR advanced writing are not asking for something better, but something different (Williams & McEnerney, 2008). The students need to direct their skills and intelligence to new tasks using high road transfer, abstracting from one context and connecting with another. *Writer's Bootcamp* guided students towards this end.

Student readiness. For the most part, the students

were ill-equipped to successfully complete the early assignments (e.g., write an interesting lead, an engaging headline, or an effective public service announcement) at an advanced beginner level. Mid-semester, students admitted that they were not practiced, nor confident, in their writing abilities. Instead, students had cultivated a habit of perpetual revision and were accustomed to reacting to multiple tracked edits on a first draft, followed by myriad corrections suggested by the professor. Students seemingly trained themselves to respond to instructors' tracked edits versus thinking about the problem-solution steps themselves. In the end, the final piece barely resembled the students' work. Rounsaville, Goldberg, and Bawarshi (2008) indicate that "studies of writing development identify meta-cognition as crucial to knowledge transfer" (p. 97). Instead of thinking about their own thinking, students were using low road transfer. Perkins and Solomon (1988) state that "low road transfer reflects the automatic triggering of well-practiced routines in circumstances where there is considerable perceptual similarity to the original learning context" (p. 25). Further, students did not demonstrate positive transfer from the prerequisite course or during the first half of the advanced course. In sum, they did not reveal a capacity to initiate substantive, thoughtful, targeted, and meticulous writing for public relations.

The PR Toolbox. While reports have indicated that practitioners and educators agree that the practical skills necessary for entry-level applicants for public relations positions should include the ability to conduct research and write news releases and newsletters (Auger & Cho, 2016), there appears to be an assumption of curricular consistency across accredited public relations programs. Writing for public relations is a creative enterprise which involves a rapidly changing communication environment. The PR Toolbox was created to enhance individual efforts to be competent communicators both internally and externally; and to help develop sensitivity to the need to convey and receive information quickly and accurately. The toolbox is a collection of tactics and formats from which student teams can choose in order to address their assignments within the framework of authentic exercise.

The toolbox consisted of press releases, leads, fact sheets, backgrounders, paid marketing advertisements, public service announcements, media alerts, special events, video news releases, search engine optimization, internal communication channels, contests, social media, and partnership collaborations. Students recognized each tool as an element of previous courses in the program and, as a refresher, defined and discussed them as Writer's Bootcamp was introduced. The exercise of selecting a specific apparatus from the toolbox involved both strategic thinking and client-centered, problem-based learning.

Motivation to write. Although students recognized

the need to write well as essential in a PR major and understood that practitioners consider effective writing as critical to success in the profession, this understanding did not seem to be sufficiently motivational. Camfield (2016) observed that because students often perceive writing as an overwhelming “monolith,” (5) most lack the coping skills necessary for dealing with the natural setbacks that are part of the writing process. In order to help students avoid “feeling stuck” (5), improve coping strategies, and promote intrinsic motivation, writing assignments were assigned and completed in class using a team approach. The excitement and genuine engagement that developed in this context can, in part, be attributed to small group learning and social interdependence theory.

Active small groups and authentic exercise. An active student team approach was designed to enhance discussion, creativity, collaboration, and proficiency. Active teams, composed of three or four students, were created by the instructor. Grouping was based on academic background, gender, and country of origin. This was a successful tactic in vesting the students in a framework that was both diverse and dynamic.

An authentic exercise, chosen by the professor and based on a real-time, engaging public relations situation, began every lecture. For example, the Marriott millionth mobile check-in was celebrated with a surprise lobby dance party. The video of the actual event, and a recount of its results, were presented as stimuli to student groups. These groups were then tasked to become Marriott’s competitor and prompted to respond to the successful sweepstakes by utilizing one or more PR tool, write the document, and present it to peers in the classroom. Princess Cruises’ strategy to obtain user-generated content to improve customer loyalty served as another example. The details and results of Princess Cruises’ program were presented by the professor at the beginning of the lecture. Again students were asked to appropriate a PR tool to further the corporate objective of loyalty by playing it out across a digital platform. Each student team took on the role of PR department to assess and recommend how to handle the assigned situation. After being briefed on the situation and provided a video stimulus, teams were given thirty minutes to discuss and write an approach utilizing the most effective tools in the PR Toolbox. The professor walked among the teams to scaffold and redirect as needed. Student teams then had fifteen minutes to present their work on the document camera to the class, who provided feedback. The presentation format was crucial in the success of the module. The professor conducted a thorough debriefing at the conclusion of each class to summarize learning and guide the discussion toward a conclusion. What was done well and where improvements should be considered were discussed before class adjourned.

Student conferences and instructional scaffolding. In addition to scaffolding teams during authentic exercise, the professor employed a scaffolding method during

student conferences to allow for individual effort in correcting errors or performing tasks with instructional guidance and prompts as needed. Conferences were held during office hours on a voluntary basis, and they functioned to provide expertise, focus, and motivation to the students. A large portion of conferencing related to the final writing project, which was completed individually in order to help shape and support writing independence.

Writer’s Bootcamp certification. In the spirit of achievement, individual I Survived Writer’s Bootcamp certificates were presented to each student at the end of the semester. This gesture was well received.

Findings

Three metrics were used to assess the impact of active learning in small groups and authentic exercises in writing: critical incident reports, grades based on a programmatic writing rubric, and a reflection instrument.

Critical Incident Reports

Informal verbal reports were provided by students at the end of class four times during the last half of the semester.

Critical Incident Prompts:

Q1: What action (if any) did anyone take that you found was most affirming / helpful?

Q2: What action (if any) did anyone take that you found most puzzling / confusing?

Q3: What was the most important information you learned during today’s class?

The findings were recorded and collated by the professor, attributed by key phrase, and clustered around three themes: (1) authentic exercises and transference; (2) active small groups and collaboration; and (3) Writer’s Bootcamp and practice-based learning. A qualitative thematic analysis of student responses was conducted at the end of the semester (Table 1).

Students found that working in active small groups on authentic assignments and presenting their work to peers helped to advance their communication skills. Critical incident reports revealed that students cared more about concise and accurate writing, the organization of their writing, the expansion of word choice, and application of AP stylistics than they did their grades. Most puzzling or disconcerting to students was the time (thirty minutes) given to complete each assignment. Critical incident reports also revealed that as students grew accustomed to the Bootcamp structure, they became more efficient. Perhaps the most important information gleaned from the critical self-reporting, in terms of future implications, was the

Table 1
Critical Incident Reports: Thematic Clusters and Significant Statements

Theme	Statement
Authentic Exercises and Transference	<p>"I used more PR tools in this one class than in my total undergraduate career."</p> <p>"I liked the Marriott video about the lobby event. It was exciting. I'd like to be a part of something like that."</p> <p>"I learned how important understanding the situation is."</p> <p>"I learned that PR is fun!"</p> <p>"I learned that writing is the last thing in the process, not the first."</p> <p>"I liked pretending to be a practitioner."</p> <p>"I see where the authentic exercises helped me take what I'm learning and apply it to a very real situation."</p>
Active Small Groups and Collaboration	<p>"My team pushed me and I pushed my thoughts to the best possible limit."</p> <p>"I liked being in a group thinking about the situation instead of being alone."</p> <p>"I liked when my team thought my ideas were good. I like being creative."</p> <p>"I felt good presenting. Sometimes other teams did a much better job and I learned a lot from them."</p> <p>"The team brings ideas I would not have thought of."</p> <p>"My team is getting better now at outlining what's important in the real business examples."</p> <p>"I liked looking at an issue from different angles."</p> <p>"I was motivated to write better because my classmates were going to see it on the doc cam."</p>
<i>Writer's Bootcamp</i> and Practice-Based Learning	<p>"I developed confidence and pride in my work by working in teams on real assignments."</p> <p>"I liked thinking about a solution to a real problem before I started writing."</p> <p>"I learned to look at an event through a competitor's eyes. It helped me think about PR from a business perspective."</p> <p>"I felt that the 30 minutes went by too fast. We may have done better work with an hour."</p> <p>"I'm not bored with writing anymore."</p> <p>"I am more confident in writing and presenting."</p> <p>"I learned that writing with a real purpose, really weighing the facts, is a better process than just writing for a grade."</p> <p>"I like <i>Writer's Bootcamp</i>. I liked doing quick research on the competition."</p> <p>"I care more about my writing now. My writing has a purpose."</p> <p>"I really pushed myself every class."</p> <p>"I learned to write a pitch letter and lead."</p>

common rumination on the imperative of critical thinking before writing.

The suggestion of implementing Writer's Bootcamp for the duration of an entire semester was unanimous. Importantly, students reported enjoyment and gratification in exploring the role of a practitioner taking on real assignments. Many responses displayed an emotional investment in writing. The qualitative data was classified and compared against assessments in the writing rubric and reflection instrument.

Grades

Grades were assessed in accordance with the established writing rubric of the public relations program. Valuation against the following eight criteria, on a scale of EXCEPTIONAL to UNACCEPTABLE, was completed for each student, on each of the writing assignments, throughout the semester:

- Overall content and organization
- Writing organization and structure
- Tone of writing, sentence structure
- Word choice
- Grammar and spelling
- Application of AP (Associated Press) style rules
- Satisfying the assigned requirements

Although the programmatic rubric was familiar to all upper-level students, it was reviewed and discussed in the first session of the advanced writing class.

Writer's Bootcamp evoked a greater sense of wanting to perform well, and scores reflected this, up on average 1.5 letter grades in the last half of the semester. Critically, all students moved out of the UNACCEPTABLE category (poor organization of work, ideas fail to make sense together, reader loses interest, tone is unprofessional, errors in sentence structure, frequency of spelling and grammar errors, paper does not meet the requirements). Progress in the grading scale mirrored positive self-reporting in the critical incident reports.

Written Reflection

In the final class students completed a written reflection activity without the professor present. Responses were anonymous. The instrument, comprised of twenty-four questions on a Likert five-point scale and fourteen open-ended questions (Table 3), was administered online in order to preserve anonymity with respect to handwriting. This allowed individual students to express how much they agreed or disagreed with a particular statement relating to

the advanced writing curriculum, as well as to provide focused, annotative feedback. Reflective responses were analyzed for recurrent themes using an open coding system.

Emergent themes, rated on the Likert scale as *strongly agree* or *somewhat agree*, are exhibited in Table 2.

Reflections that were rated neutral by students involved confidence, self-governance, and leadership. Open-ended positive reflections included a cadre of brief statements and succinct assessments, such as:

- It was great
- It helped me think
- Start it earlier in the semester
- It pushed me
- Do it in other classes

A common theme was that the Writer's Bootcamp was engaging, educational, and gratifying. All students (n=19) agreed on the efficacy of key motivations and behaviors in the following areas: practical knowledge, leadership, critical thinking, self-regulated learning, pride, analytic thinking, communication skill development, confidence, collaboration, problem solving, formulation of questions, academic growth, and growth in writing.

The quantitative findings of the reflection instrument, the advance of student scores across the writing rubric, and the qualitative testimony in self-reported critical incidents together attest to the effectiveness of the experiential module.

Limitations

Although several important pedagogical implications can be made through the results of this study, there are some limitations. The first is acknowledging that the advanced writing course contained a split format consisting of two distinct teaching modalities: lecture / discussion (independent writing outside of class during weeks one through six) and active small groups / authentic exercises (collaborative writing in class during weeks seven through twelve), it would be useful to further examine the relationship between the two settings and its effect on outcomes.

Also, this study does not compare the following various areas: the amount of participation of the group as a whole, the equality of participation among members, or the amount of student participation per written response. Additionally, student perceptions are examined in terms of satisfaction and learning when comparing small group learning (SGL) to other instructional methods. Although improved writing is the goal, critical thinking responses through participation, for example, appear to enhance the

Table 2
Written Reflection (n=19) - Likert scale

For each of the questions below, circle the response that best characterizes how you feel about the statement, where 1 = Strongly Disagree, 2 = Somewhat Disagree, 3 = Neutral, Neither Agree nor Disagree, 4 = Somewhat Agree, 5 = Agree

	Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree
	1	2	3	4	5
I gained practical knowledge about PR and business					
I had the opportunity to be a leader with people					
I had the opportunity to be a leader on subject matter					
I experienced the opportunity to think critically by applying skills learned					
I experienced self-governance and self-directed learning					
I experienced pride in this work					
I experienced the opportunity to think analytically by interpreting current results					
I experienced the opportunity to think analytically by developing a number of strategic scenarios					
I developed written and oral communication skills					
I acquired new knowledge					
I developed problem solving skills					
I developed confidence with subject matter					
I developed confidence with people					
I developed skills in the art of collaboration					
I developed a comfort with looking at things from different perspectives					
I developed confidence in working creatively and with my imagination					
I learned to formulate questions that led to discussion or learning					
The resources at my disposal were ample to accomplish the assignment					
The experience led to personal growth					
The experience led to academic growth in my field					
The experience led to my growth in writing					
I feel I was prepared for the rigor of this experience					
I cared about the <i>Bootcamp</i> assignments					
I care about the perfection of my portfolio					

Table 3
Written Reflection – Open-ended

Q1. My greatest learning experience on this assignment was
Q2. The greatest impact on me from this assignment was
Q3. My greatest disappointment from this assignment was
Q4. My largest contribution to this assignment was
Q5. Now think about your contributions specifically, what was your greatest leadership contribution?
Q6. What was your greatest critical thinking contribution?
Q7. What your greatest analytical thinking contribution?
Q8. What was your greatest collaborative contribution?
Q9. What were the most useful resources you had available for this assignment?
Q10. Do you remember thinking more deeply or less deeply in this assignment versus an in-class course over the same semester?
Q11. What were the obstacles to this assignment?
Q12. Was this a meaningful assignment? If yes, in what way?
Q13. Was the professor available to provide input and advice?
Q14. How would you improve the Writer's Bootcamp experience?

construction of knowledge, self-understanding, and self-confidence. Acknowledging what is actually being said by students when they participate in a think tank atmosphere is also important. Suggestions for further research include ways in which to promote more useful forms of participation in group work, perhaps through additional scaffolding. Further analysis of group work regarding the quality and nature of the discourse and its relationship with written responses is a fruitful area for further research. Individual conferences were held during office hours on a voluntary basis. It may be useful to examine the potential effects on learning outcomes if this were made mandatory.

Other researchers might implement this experiential module in writing courses that have a particular business or pre-professional focus. Future research might also include a formalized, longitudinal examination of the real effects or benefits of Writer's Bootcamp through a survey of Bootcamp alumnae who are practicing in the field.

Conclusions

The experiential module described in this paper suggests that both the course redesign (classroom as

think tank versus lecture hall) and the active small group learning environment (student teams writing and editing in collaboration) led to positive impacts on student performance in an undergraduate advanced writing course. Both the initiation of active small groups and implementation of authentic assignments spurred student engagement, motivation, and prideful performance. The qualitative aspects of this research help to confirm a high level of student engagement and development when working in small groups on an authentic exercise. A comparison of grades from the first half of the semester (average score: D+) to the second half (average score: B) suggests that the experiential module, Writer's Bootcamp, helped to hone the writing skills of students and positively affect communicative competencies.

Given the importance that writing in the public relations profession holds, this proficiency is a cornerstone in the curriculum for preparing students for the workplace. Collaborative learning constructs, predicated on social interdependence theory, helped to initiate self-reported gains in student efficacy, learning, and confidence. Writer's Bootcamp was created to promote active student involvement in writing and pre-professional discourse.

Because students were required to participate in a synthesis of opinion and aptitude, their understandings of authentic situations, as well as the serious, professional responses these warrant, deepened. A supportive environment, or think tank neighborhood, further enhanced collaborations in writing, peer editing, and presenting. Instructional scaffolding helped students effectively take on complex and unfamiliar tasks. In addition to improved communicative competence, students built an emotional framework of trust and excitement that can be carried into the workplace.

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A Team-Based “Public History” Assessment for Undergraduates: Rationale, Design and Implementation in a Medieval History Course

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The design of assessment in undergraduate history courses, as university populations grow and change, must adapt to meet and serve a range of new pedagogical imperatives and student constituencies in order to ensure both disciplinary integrity and the development of employability skills transferable to work in other fields. In delivering an elective course on Medieval history we have developed the “Medieval Expo,” a team-based assessment task that challenges students to develop a presentation aimed at educating a general audience on a specific aspect of Medieval history. The task aims, primarily, to develop students’ ability to communicate complex information to a non-specialist audience as well as develop effective teamwork skills: two valuable characteristics for humanities graduates entering any career, while still reinforcing the importance of historical study. A “scaffolded research” model, providing foundational structures that guide student research, is combined with opportunities for students to exercise creative freedom, providing suitable pedagogical support yet maximizing opportunities for student engagement. The reported benefits of this task include increased student engagement with the course content; smoother transitions to tertiary study through the formation of friendships, which is crucial for retention; and increased awareness of the employability skills embedded in the liberal arts.

The purpose of an education in history at tertiary level is rarely to produce historians (Graduate Careers Australia, 2016a, 2016b, 2016c; Nicholls, 2005a, 2005b). Furthermore, many students who enroll in Medieval history courses, often available as electives in the Australian system, do so because of a personal interest and not because they intend to focus their tertiary studies in the discipline. Yet, traditionally, curriculum and assessment design in history at the tertiary level has emphasized disciplinary training and content over transferrable skills (Bulaitis, n.d.). As university populations grow and change, however, design of both curriculum and assessment in history courses, and perhaps particularly Medieval history courses, must adapt to multiple pedagogical imperatives and serve a range of constituencies. It must continue to reflect disciplinary integrity and provide foundational training for the minority of students who will become historians, as well as the larger numbers who will employ their disciplinary training in the workplace. Yet, it also needs to provide something of evident and transferrable value to history and humanities students who will eventually find work in other fields, as well as to students who will return to focus on other disciplines at the conclusion of the semester. In this article, we describe a complex task we have designed and implemented in a first-year Medieval History survey course to address these needs.

Diverse Constituents

The course in which this task takes place is open as an elective to undergraduate students from across our

university who may be enrolled in Bachelor degrees as broad as Arts, Economics, Law, Science, and Medicine. The course is arranged in a common lecture plus tutorial model, requiring three contact hours (two-hour lecture and one-hour tutorial) plus nine hours of private study per week. Although our course is designated as a first-year or entry-level one, we often find later-year students enrolling as an elective option. The course can also be selected as the first building block of a major in History within a Bachelor of Arts, comprising a minimum number of core and elective courses chosen from within the discipline across a three-stage program. Full-time students would ordinarily be enrolled in four courses during a given semester of study, and they will have many competing demands on their time. In designing this new assessment task, we have tried to recognize the variety of background knowledge, experience, intentions, and timetables of our diverse constituents in order to develop a task that is structured, yet flexible enough to offer meaningful learning outcomes for all.

Rationale

A well-designed undergraduate course provides students with the means and incentives to acquire and demonstrate a wide range of discipline- and employment-related skills, as well as specialist knowledge. Traditionally, course design in tertiary history has emphasized specialist knowledge and training in disciplinary norms of academic communication, but there are many other skills that graduates will require in their careers, even if they pursue employment in the field. The work of practicing historians, for instance,

encompasses formal academic writing as well as communication to a range of audiences beyond one's peers, from students to granting bodies, to interested members of the public. Similarly, while historical work is often solitary, historians increasingly work in collaborative situations, from consultancies to co-authorship, from team-teaching to cooperative funding applications (Professional Historians Australia, n.d.; Schulz, Miller, Marrs, & Allen, 2002). It would seem, then, that tertiary historical training has a moral obligation to develop students' skills in both disciplinary and extra-disciplinary arenas, in academic and other discourses, and in teamwork as well as solitary endeavor. This is all the more important given the multiple employment destinations of students who undertake undergraduate history study.

We identified the capacity to communicate complex information clearly to a non-academic audience and the skills of effective teamwork as two characteristics of particular value to humanities graduates entering any career, including in history. We therefore decided to design and implement an assessment task that would promote the development of these skills among our student body.

Introducing a new major assessment task is a significant imposition on student time and cannot be achieved without removing something else from a course's assessment portfolio. In our case, we decided to eliminate the final examination to make way for this new task. We regarded the examination as the least useful part of the existing assessment portfolio because of its tendency to reward recollection of factual information over the more complex and valuable skill of historical thinking (Ercikan & Seixas, 2015). Furthermore, the “rush job” conditions of examination do not resemble the working conditions under which our students are likely to employ their historical or transferrable skills in the future and tend to produce poor quality work (Maxwell, 2010). Instead, we wanted to take the opportunity to create assessment that authentically reflects the kinds of challenges that students will one day need to meet, as well as the environments in which they might need to apply the skills they acquire in our class.

The Shape of the Task

The “Medieval Expo” that we discuss here is a complex assessment task undertaken over an eight-week period by small teams of undergraduates enrolled in a first-year survey course of Medieval history. The “Expo” unfolds over the latter two-thirds of semester after students have received preliminary instruction in core content and basic research skills. It complements traditional tasks such as a primary source analysis and research essay in the assessment portfolio of the course.

Student effort in the task is supported by a carefully scaffolded program of in-class interventions and instruction to assist students in developing both project content and team management skills as the work proceeds (Appendix A). We discuss this further below.

The goal of the task is to produce an authentic work of public historical communication designed to convey quality, curated information about a Medieval historical topic to a non-specialist audience. It is thus intended to encourage students to develop and use skills complementary to those tested by standard assessment formats such as academic essay writing, and especially to reflect on how the requirements of other communicative genres influence decisions about content and style. It represents a work-like situation in which students are expected to translate their academic research skills into new arenas.

Team Formation and Team Function

The Medieval Expo relies on teamwork, which is rarely incorporated into tertiary history curricula or assessment. We wanted to introduce teamwork into our course for its connection to employability (Mutch, 1998), and because of its capacity to ameliorate the sense of isolation often experienced by university students in broad degrees such as Arts, thereby promoting student retention and successful transition into tertiary study (Cartney & Rouse, 2006; Tinto, 1993). Ideally, graduates need to be able to work effectively in teams while solving “un-structured, real-world” problems (Goltz, Hietapelto, Reinsch, & Tyrell, 2008). Teamwork aligns with the graduate attributes of our degree program, which identify being a skillful team worker as a target outcome. Skills such as the ability to “work together by assisting one another to the greatest possible extent; [to be] effective at managing conflict; and ... [ensuring that] each team member is responsible and accountable” are desirable in the workforce and relevant in a range of employment situations (Riebe, Roepen, Santarelli, & Marchioro, 2010, p. 529). Furthermore, teamwork can be satisfying for students because it enables them to produce a piece of work that is more complex and developed than they could achieve alone.

Despite the weight of pedagogical evidence for the value of teamwork as a learning strategy and as a desirable employability outcome, students often express a degree of resistance or anxiety around group activities. In our experience, student resistance to working in teams was reduced by framing the task as an opportunity to acquire real employment-related skills, and also by an explanation of our assessment strategy, discussed further below, which awarded grades both to the individual and the team.

The quality of activity design can also significantly ameliorate students' teamwork-related anxiety (Bacon, Stewart, & Silver, 1999; Krifik and Mullan, 2007;

Oakley, Felder, Brent, & Elhaji, 2004). Two design features have been found materially to enhance students' comfort with teamwork activities and acquisition of relevant skills: first, team-based assessment must be supported by training in relevant skills (Oakley et al., 2004) and clearly articulated instructions (Bacon et al., 1999); second, teamwork itself must be assessed since assessment credit is a primary driver of student effort (Gibbs, 2006). The need to embed skill development for teamwork within curriculum and assessment design is especially acute in humanities disciplines, such as history, where entrenched images of the solitary scholar dominate both staff and students' conceptions of disciplinary work, and working in a team can be both unfamiliar and daunting (Bulaitis, n.d.).

In designing the Medieval Expo as a team-based task, therefore, we were aware of the need to impart the teamwork skills we expected students to display, just as we provide developmental advice on researching and structuring an essay. Our revised curriculum, therefore, incorporates tutorial time consistently throughout the task to discuss team dynamics and roles, as well as to share expectations and past experiences of teamwork. We establish teams as early in semester as is practicable (see below) to enable adequate time in the curriculum to address core skills, and because the longevity of a team is correlated with better teamwork experiences at the tertiary level (Bacon et al., 1999). After initial discussions on introductory teamwork issues, teams complete a dossier of the background knowledge, skills, and relevant experience of all team members, the better to understand the available human resources (Eberly Center for Teaching Excellence and Educational Innovation, 2015a). They then draw up a ‘team contract’ to govern their interactions and lodge a copy with their tutor as an insurance policy against significant discord (Eberly Center for Teaching Excellence and Educational Innovation, 2015b). These documents provide a platform for a team's first serious negotiation to determine what topic they most prefer to address (see below). In reaching this decision, we encourage teams to consider the prior knowledge and skills members bring to the table, their personal interests, the skills or knowledge they particularly hope to develop, and the chosen topics of their other assessment in the course as they decide how best to deploy their available human resources.

Over the following weeks, a proportion of class time is dedicated to introducing students gradually to a range of team-related practices, alongside continuing discussions of core content (Appendix A). For instance, subsequent tutorials include scheduled workshops on negotiating conflict and ways that ‘good’ students might be facilitating poor team function, such as through hoarding responsibilities (Oakley, 2002). Tutorials also incorporate regular opportunities to

practice working as teams, while debating questions of specialist knowledge: indeed, some tutors have successfully used the Expo teams as the basis of all small-group discussion in class, even asking teams to sit together regularly, in order to encourage bonding. In addition, at the half-way point of the task, students complete an anonymous, interim team evaluation in which they rank their team's function in a range of criteria (Eberly Center for Teaching Excellence and Educational Innovation, 2015b). These evaluations are returned to tutors who then provide each team with both a synoptic view of the issues most in need of attention and an opportunity to workshop possible resolutions.

Forming the teams. Carefully arranging team membership is vital for achieving equity and real-world applicability for team assessment tasks, and several methods are available (Kelly, 2008; Mantzioris & Kehrwald, 2014). We adopted a staff-driven method for appointing students to teams, to ensure diversity and approximate as closely as possible to ‘real-life’ situations in which employees rarely have opportunities to choose to work with friends. Although students tend to prefer self-selected teams (Bacon et al., 1999; Bosco, Jervis, & Harvey, 2009), we have found they are generally receptive to the argument that appointing teams gives them a more relevant employment experience.

Our team assignment protocol is adapted from the principles described by Oakley et al. (2004). Tutors meet with the course coordinator to appoint teams of 4 to 5 students at the end of week three of the twelve-week semester, having noted carefully the interests, habits and proficiencies of students in their classes over the first three weeks. Some tutors have found it useful to distribute personal interest questionnaires early in semester to facilitate this process. We allocate to each team at least one student whose confidence and disciplinary aptitude is already evident; attend to the gender, age, ethnic and religious (where known) diversity of teams; try to ensure that shy or quiet students are not isolated in a team of otherwise loud and confident students; and aim to allocate especially dominant students with at least one colleague who is likely to be capable of disagreeing openly. We also aim to separate students whose behavior seems disruptive to class discussion. By following these principles, we aim to provide each team with an equally strong opportunity to complete the Expo task successfully, as well as to distribute the challenges of negotiating diversity evenly across the student body.

In our institution, class size and membership tends to stabilize by the end of the third week, so this is the earliest point in the semester when appointing teams is practical. Even so, continuing fluctuation of student numbers and late withdrawals from the course mean that final team sizes have ranged from 2 to 5 in practice. Students sometimes express anxiety about a larger

workload falling on fewer shoulders. We allay their concerns, however, by explaining that the team has creative freedom to refine their project goal so that it is achievable by the remaining members. We have not noticed any discernible effects on the general quality of the final product.

Team Roles. Using the team role schema outlined by Oakley et al. (2004), we assign students to a role at the beginning of the task. Each team has four core roles: facilitator, record keeper, monitor, and time keeper. These roles ensure that the team’s discussions are directed, that records of decisions are kept and circulated, that attention is paid to whether all members have understood the decisions of the team, and that the team’s schedule is on track. At the beginning of the task, we distribute materials explaining these roles, and a range of additional roles that team members may adopt on an ad hoc basis, such as creative thinker or devil’s advocate.

Assigning these roles draws students’ attention to the diversity of skills and contributions that teamwork requires. It is also important for providing students with a clear role to play early in the task, when they are still developing their understanding of the requirements of this complex project. We assign the most confident and articulate students in each team to the position of “facilitator” for the first two weeks to ensure that teams have stable hands at the helm during the early stages of discussion that require focused leadership. We then asked teams to redistribute roles among members every two weeks to ensure that all team members have an opportunity to practice core skills of team management.

Scaffolding for Getting Started

Expecting students to exercise autonomy beyond their existing experience and skills generates anxiety among students and unnecessary additional work for staff (Hackling & Fairbrother, 1996; Willison & O’Regan, 2006). Assigning students to specific roles within their teams is one mechanism for providing solid foundations from which students can begin to develop autonomy with confidence. Additionally, we designed the Expo task to provide clear starting points and boundaries within which teams’ projects take place. Student teams are given a choice of three thematic prompts as starting points for their project: Conflict; Faith and Reason; and On the Margins. Each prompt outlines an area of Medieval history about which there is public misconception, and which relate to core content of the course. For example:

Theme: Conflict. The general image of Medieval life tends to emphasize violence, and regard medieval people as more bloodthirsty than today. Is this correct? Design a presentation to educate a

general audience about an aspect of conflict in society in the period after 1000.

Having chosen a theme, teams can select from a range of possible formats and format-specific parameters that act as a guide to the required effort and provide a measure of equity among dissimilar formats. Teams may choose to produce a poster (maximum 1.2m x 1.2m), a podcast (maximum 4 minutes), a video (maximum 4 minutes), or a website (maximum 1 homepage and 4 “child” pages).

Within these restrictions student teams are free to exercise creative control, but our design intentionally provides both a general starting point and an overall goal. The Expo is thus aligned to the “Scaffolded Researching” model described by Willison and O’Regan’s *Research Skill Development Framework* (2006), in which foundational structures provided by the educator enable and shape the development of students’ independent research.

In addition, we provide students with a recommended guide of 21–22 hours of work per team member to help them gauge and plan the size of their project. We calculate this based on a formula that takes account of institutional guidelines for the work hours required for a first-year course, the set contact hours, expected tutorial preparation time, and the grades apportioned to each assessment task as follows: 144 hours (total) = 36 hours (contact) + 36 hours (tutorial reading and preparation) + 72 hours (preparing assessment). Since the “Expo” accounts for 30% of all assessment, we advise students to expect to spend a total of $(0.3 \times 72 =) 21.6$ hours on the task.

Creative Freedom

A degree of creative freedom and the opportunity to pursue topics of personal interest are valued by students in assessment settings, and they have been found to boost engagement (Sternberg, 2002). We therefore designed the Expo to allow considerable student autonomy both in planning and directing the project, while providing a safety net of scaffolding to guide their work, as discussed above. For example, teams have freedom to define their “non-specialist audience,” but they must be able to explain their decision and how it determined their project design. Student teams have chosen audiences as diverse as primary school children, school teachers, talk-back radio listeners, and retired professionals, adapting their projects accordingly.

Teams also have freedom to determine how to distribute work within the team, allowing for each member’s strengths and availability, and have some freedom to agree on penalties to be applied to team members who fail to deliver their promised

contribution. We emphasize that team members are not expected to contribute the same kind of effort to the task, provided they contribute proportionately and in a mutually agreed way.

The one creative restriction that we placed on students was that *Drunk History*, the web-series/tv comedy premised on unreliable and inebriated narrators explaining historical events, was not a suitable model for this task (O'Sullivan, 2015). We reasoned that since the goal of the Expo was to curate and explain information of an academic quality to a wider audience, such models were explicitly contrary to the project's proper aims.

In this way, the Expo is aligned to the Work Skill Development Framework for student autonomy (Bandaranaike & Willison, 2009, 2010), encouraging students to develop from a relatively “bounded” approach to tasks toward a more autonomous

“scaffolded” approach, in which they are able to work independently within provided guidelines.

In our experience so far, student teams respond with real flair to the creative opportunities the Expo provides, in the process learning and demonstrating high caliber skills both of specialist research and public historical communication. Highlights of the task to date have included, for example, a mini-documentary on the relationship between the Medieval past and the pop-culture violence in “Medievalist” television and cinema, a high-school classroom poster on the history of the Crusades (Figure 1), an interactive website on Medieval childhood with activities for school children and accompanying resources for teachers (Figure 2), a satirical video on Medieval attitudes to women and a mock radio interview with leaders and participants from the Children's Crusade.

Figure 1
Example of a student poster

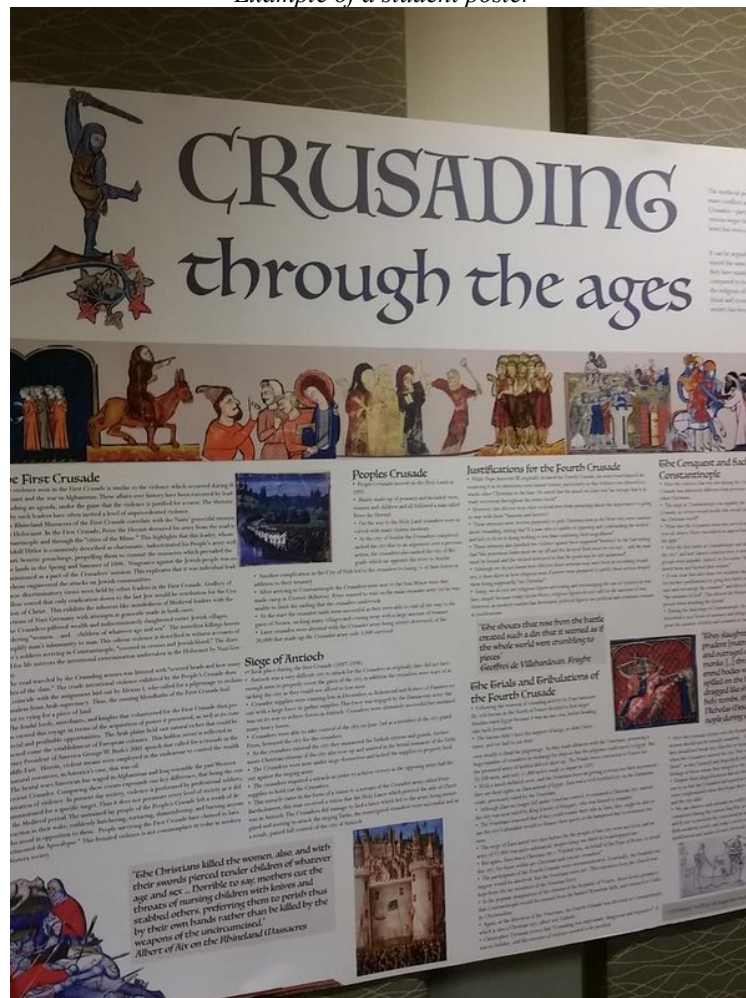
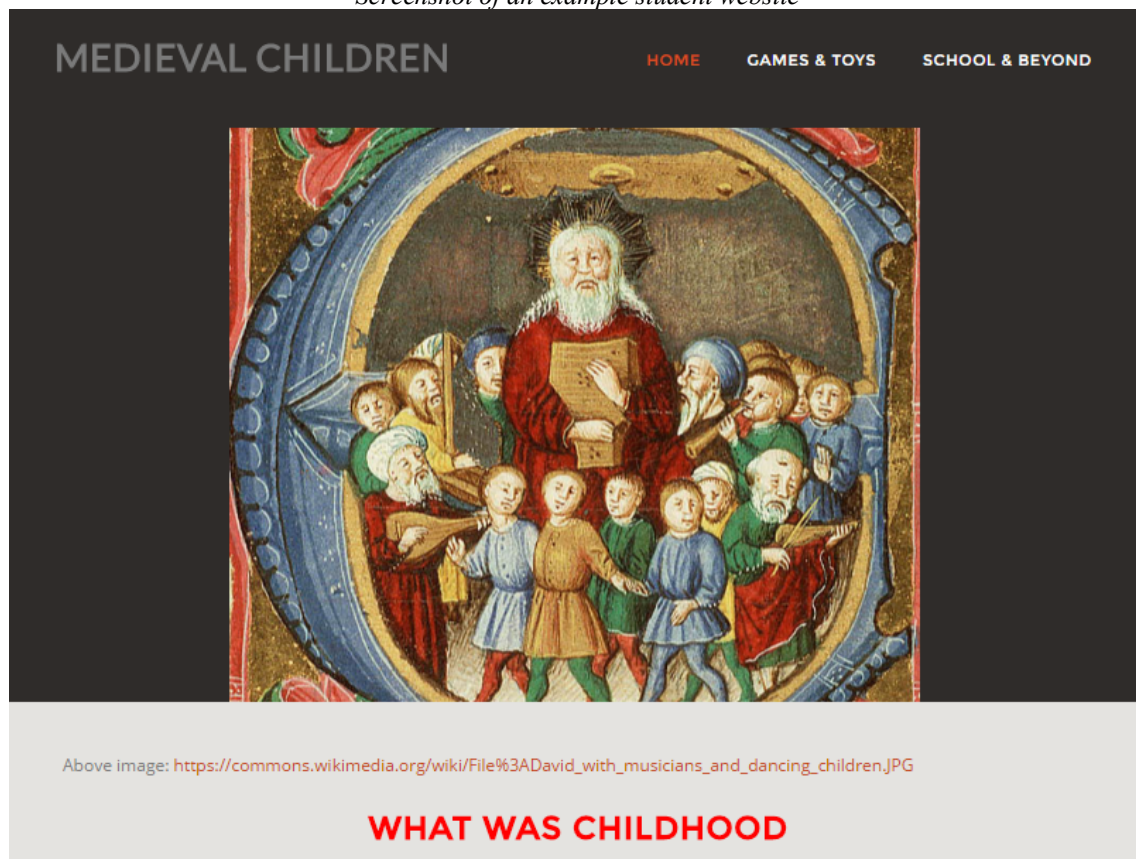


Figure 2
 Screenshot of an example student website



Communicating Beyond the Academy

The Expo was designed as an exercise in public communication of historical information in order to provide students with experience in packaging their growing specialist knowledge in a variety of ways. “Public histories” represent opportunities for historians to translate specialist knowledge for a wider audience in which both medium and audience exert influence on what and how specialist knowledge will be conveyed (Archer & Breuer, 2015; Pope-Ruark, 2011). They therefore represent a productive example for revealing the relationship between specialist historical knowledge, communication medium, and audience to students. For example, a booklet for tourists needs to meet different criteria from a documentary for primary school children, even if both address the events of the Battle of Hastings, and both will be considerably different from a scholarly essay on the topic, even if all three share core background research.

In our experience, students are familiar with encountering public history, but unfamiliar with appreciating, analyzing, or practicing it as a form of serious

historical communication. Examples of Medieval public history communication are easy to find, from movies like *Braveheart* and drama series such as *Vikings*, through History Channel documentaries, to children’s books and programs such as *Horrible Histories*, popular history books like Simon Schama’s *History of Britain*, and innumerable historical fiction books, popular podcasts, websites, and re-enactment activities. To increase students’ awareness of the core issues we introduce a range of such models of public history into tutorial discussion early in the course (Appendix A). Tutorial preparation materials then prompt students to consider the nature of the audience of particular examples and to discuss what effect this had on the degree of detail or simplification, as well as the nature of the narrative presented. We also encourage students to locate further examples of public history for comparative discussion at key points during semester.

These comparative discussions develop students’ awareness of the differences between, for example, a scholarly article on Magna Carta and a children’s song about it. We dedicate a proportion of class time to drawing out how and why historical information has been curated and expressed for a given audience, and to consider the difference between audience-appropriate

description and “dumbing down.” Students are also given an opportunity to view a sample of past Expo projects across the full range of available formats, as well as to discuss in class what approach(es) seem best tailored to delivering certain types of information to certain audiences. In addition, teams can elect to bring queries about tailoring their information to their chosen format to their tutors for guidance in any of their two opportunities to seek substantive formative feedback.

In contrast to the class and consultation time we dedicate to understanding how to tailor information for a non-academic audience, our assessment design does not include practical instruction on the technical skills of producing projects in any given format. Teams are encouraged to determine their preferred format as part of their creative freedoms and organizational independence: they can leverage the existing skills of a team member or members, for example, to make a short video; or they can elect to dedicate the time commitment of a given team member to acquiring basic skills in, for example, web page production on behalf of the team. We have found students are often keen to exploit this opportunity to develop a new skill and to complete a project through which they will be able to demonstrate it to potential employers.

In-Task Troubleshooting

The skills and practices of teamwork are strongly present in our curriculum, yet the Expo task is designed to encourage self-management of the student teams and thereby to develop students’ capacity for independent work. Our processes for staff intervention in team dynamics and project development outside class time are therefore deliberately minimal. This also has the useful effect of minimizing the work of oversight that would otherwise fall on tutorial or coordinating staff. Through an appointed spokesperson, teams may seek ungraded feedback from their tutor on matters of project design or content twice during the eight weeks of the task, and they may ask for advice about managing team dynamics at any time, but they are encouraged to manage conflict among themselves, especially by reference to the team contract.

In the first year of the task, we found that this system was adequate to manage dynamics in the vast majority of teams; however, the occasional teams in which serious disputes arose still occupied significant staff time. In the second year of the Expo, we therefore introduced a system for excluding students who generated significant team disruption. Because we wanted to encourage students to resolve issues autonomously where possible, and to discourage the escalation of petty disagreements, the process of formal mediation for egregious cases of team breakdown we established was relatively onerous. Under this system a troublesome student can be “fired” from a team, but

only after several formal stages of conflict resolution have been attempted and documented (Appendix B). We are direct in explaining to students that this is a system of last resort and that we expect them to make every effort to resolve conflicts internally as part of their team management responsibilities. We have found that teams who are experiencing low-level conflict typically retract their complaints and resolve their difficulties when this is explained to them. Nearly fifty student teams have passed through the Expo since this modification, and we note that student conflict rarely proceeds to formal mediation by staff. Instead students successfully resolve disagreements among themselves by using their team contracts and the problem-solving skills provided in class. Individual students have, nevertheless, occasionally absented themselves from a team by failing to attend or participate, and when this occurs, teaching staff observe practices normal in our courses to follow up, encourage participation where possible, and put struggling students in touch with support services.

The Final Performance

The ultimate Expo event is conceived as a celebration, as well as an opportunity for students to embody their developing professional identities, cementing the sense of cohort that their teamwork has developed throughout the semester. All projects go on display in a communal exhibition in which students have an opportunity to engage with and evaluate each other’s work. We also invite academic staff and research students from across our school, as well as support staff from the library and learning skills teams. The event is opened by our Head of School, who issues a formal congratulation to the students on their work. This formal welcome also serves to articulate and praise the skills students have gained and demonstrated in completing the task. As Boys has observed, “[W]hile humanities undergraduates may develop a wide range of skills which employers want, they are not as conscious of their value as other undergraduates. They need... to be made more aware of their value on the labor market” (Boys, 1992, p. 122). We therefore aim, as a parting gift, to end the task by using a figure of authority to impress upon the students the range and transferability of the skills they have acquired.

The exhibition takes place during the final lecture time of semester, lasting two hours. During this time team members take turns to act as spokespeople for their team to answer informal questions from peers and assessors, especially concerning the team’s research process, design rationale, and assumptions about audience. Those who are not committed to spokesperson duties take the opportunity to browse the other work on display and to vote on the most effective

projects. Adding to the festive atmosphere, staff (and some students) come in period costume, and we award prizes and certificates to the most popular displays determined by peer evaluation. Some student teams have brought along food prepared according to period recipes to share as a supplement to their presentations. An event hashtag encourages live engagement with a wider audience, and we collate the posts from each year’s event in Storify so that students can easily access and share them with family and friends.

To make the Expo a genuinely public activity, a selection of poster presentations are then placed on display in the History Department, and we circulate links to online content via social media to encourage broad interaction with the teams’ projects. In this way, they ultimately reach a much wider audience than those who are able to attend the Expo event in person.

Assessing the Work, the Team, and Team Members

In any teamwork task, it is vital that assessment is directed at the team’s product, the teamwork behind it, and the contribution of each team member (Davies, 2009; Devlin, 2002; Eberly Center for Teaching Excellence and Educational Innovation, 2015a; Tu and Lu, 2005). Because assessment is a primary driver of student effort (Gibbs, 2006), it can be assumed that any aspect of the task that is not rewarded in grades will not be a focus of student engagement. Therefore, if we expect students to acquire team management skills, these must be explicitly rewarded in the assessment. Students’ legitimate anxiety over fairness in team-based assessment can also be allayed by mechanisms such as assessing the product of teamwork separately from each individual’s contribution, or for adjusting the overall grade for each student by a “contribution factor” determined by correlating peer and self-assessment (Eberly Center for Teaching Excellence and Educational Innovation, 2015a; Oakley et al., 2004; Willcoxson, 2006). We opted for the former of these possibilities.

In our course, the Expo accounts for 30% of the available grades, awarded in two parts, each worth 50% of the task. Students receive a team grade for their project, and an individual grade for an accompanying personal portfolio documenting and reflecting on their individual contribution in the context of the team’s interactions. Each student’s portfolio is accompanied by a reflective coversheet in which they must evaluate the team’s function and their part within it, as well as have an opportunity to recognize the contribution of other team-mates (Appendix C). In combination with in-class tasks such as the interim team evaluation, this reflective element is intended to provoke students to think deeply about their own contribution to the smooth or poor functioning of their team, as well as to articulate realistic goals for their personal development in this area.

Assessors use these reflections to modulate the individual component of the grade to reflect both the effort the student has contributed to the project itself and the student’s contribution to and awareness of the nature of effective teamwork. We have found most students engage with the portfolio and its reflective requirements with honesty and humility; however, we do find some students reverting to a competitive mode in which they attempt to promote their own work by criticizing the efforts of teammates. These students are marked down for contribution relative to the hours they may have committed to the task because their animus reveals their lack of respect for their team and its decisions. Instead, we provide feedback referring back to teamwork-related discussions throughout semester, as well as advice on future team management strategies. Conversely, we mark students up if their peers recognize their contribution as valuable, and we explicitly congratulate them in their feedback for their dedication to the team’s work.

In practical terms, team projects are assessed during the Expo event on the basis of the display and the explanatory discussion that team spokespeople provide. Portfolios are collected at the conclusion of the event and assessed over the following week. We use rubrics to assess both the team’s project and individuals’ portfolios, designed to accommodate the creativity and flexibility of the task (Appendix D).

In our Expo, any student team member who has not formally been “fired” (see above) receives the team mark (up to 15% of the total available grade for the course), even if they have not participated actively in the project. Students occasionally express dissatisfaction at this arrangement because they assume their hard work will materially benefit the missing student. However, in our experience, no student who failed to participate in a team’s project has ever passed the course: failing to take part in the team is strongly correlated with failure to attend classes or to submit other assessment tasks, which are worth 85% of the total available grade. Explaining the small degree to which the team’s grade will influence the overall outcome for such a “free-loader,” and emphasizing the complementary importance of the individual grade typically allays anxieties concerning the fairness of the assessment system.

Outcomes

The design of the Medieval Expo encompassed a wide range of concerns. It required careful thinking about situating the task within the core curriculum, forming and managing student teams, balancing opportunities for students’ creative control with the need for staff direction, embedding a range of new skills in the curriculum, assessing both the product and the process,

inducting sessional staff in new teaching and assessment methods, and explaining and justifying a novel task to students in such a way as to overcome their learned resistance to collaborative assessment. Such a seismic shift in course design and implementation naturally comes with attendant risk, but we have found the rewards to be equally, if not more, significant. They include, for instance, increased student engagement and smoother transition to tertiary study, improved employability outcomes, and greater awareness of the tools and practices of communication, both academic and public.

The calibrated degree of creative control students have over their Expo project's content and design has proven to be a significant driver of student engagement with the task, as well as the course as a whole. Students frequently report that they enjoyed the task because it allowed them to pursue a topic of particular interest. Its unconventional format also has the benefit of enabling students to learn and/or demonstrate different skills from other assessment in the course. The novelty of the format thus increases students' interest and commitment while also exerting a “levelling” effect on achievement. Students whose main skills are in areas other than traditional written expression can achieve highly. On average, of the 340 students who have submitted both a research essay and Expo project in our course over the past two years, scores in the team project were significantly higher than in the research essay (mean improvement 9.8%; paired t-test, $p < 0.001$). Increased engagement also improved students' marks for individual Expo portfolios in comparison to the research essay, although to a lesser extent (mean improvement 5.5%; paired t-test, $p < 0.001$).

In addition to enjoying creative freedoms, students in our course have reported particularly appreciating the friendships and networks they have formed through involvement in the Medieval Expo over the past two years. We regard this as a major positive outcome of the task design, and one that we hope will exert a positive influence on students' whole degree experience. Transition to tertiary study is difficult, but especially in a liberal arts degree which lacks a shared core curriculum (Clerehan, 2003; Demetriou, Goalen, & Ruddock, 2000). Both achievement and retention in Arts are affected by students' sense of social dislocation and isolation (Mestan, 2016; Tinto, 1993). Interventions that build peer connections are particularly vital at the first-year level when students' motivation is most at risk and their transition challenge is greatest (Halpike, 2014; Waters, 2003). As well as serving sound employability and disciplinary learning outcomes, therefore, the Expo encourages engagement by providing a structured opportunity for networking and

friendship formation at a crucial moment in students' development (Zhao & Kuh, 2004).

This assessment design, which develops students' employability and general awareness of ways to apply both the knowledge and skills they acquire in a course of tertiary study was intended to respond to the challenge of making the value of historical studies explicit to students and administrators who may value vocational skills more highly than apparently esoteric knowledge. As such, it can profitably be adapted to suit many disciplines seeking ways to defend their value in a competitive tertiary “market place.” Beyond this, it may provide a developed model for assessment in any discipline seeking employment-like scenarios for student practice, or for disciplines in which outward facing communication, as much as academic discourse, is a core learning outcome. In our institution, for example, the Expo model has stimulated assessment design or refinement in Business and Economics, Medicine, and Information Technology.

In summary, the Medieval Expo offers a model of an integrated assessment task design for first year history students that builds employability, broadens students' experience of discipline-related and transferrable communication skills, encourages students to develop independence and self-management capabilities, increases engagement, and eases the challenges of transition into undergraduate arts programs. Although designing and implementing complex assessment tasks like this is time consuming and challenging, in our experience the effort has been well justified both in terms of student satisfaction and in the quality of learning outcomes within the course. Interestingly, it has also exerted a positive effect on staff enthusiasm and engagement, and it has also generated an excitement about undergraduate pedagogy that has diffused into other courses across our School. We look forward to future evidence of the task's impact on students' subsequent degree outcomes and ultimate employability as our first two cohorts proceed to graduation and into the workforce.

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Appendix A

Task Timeline

WEEK	ACTIVITY
4	Team formation by staff Thematic prompts and full task instructions are distributed Tutorial on teamwork: <ul style="list-style-type: none"> • “Meet your team” activities • Discussion of purpose of teams, assigning team roles and responsibilities • Team contract discussion in class
5	Completed team contracts are lodged
6	Public history discussion activity in tutorial
7	Examples of past projects available for viewing in class Team discussion time provided in tutorial
8	Tutorial workshop on negotiating team conflict
9	Public history discussion activity in tutorial Team discussion time provided in tutorial
10	Interim team evaluations completed anonymously Tutors use evaluations to identify common problems for trouble shooting Team discussion time provided in tutorial
11	Tutorial discussion: <ul style="list-style-type: none"> • How to be a spokesperson, practicalities of displaying your project Team discussion time provided in tutorial
12	‘Expo’ takes place in class Personal portfolios are submitted

Appendix B

Firing a Team Member

All students in the group receive the same grade for the group component unless the group has formally “fired” a student before the Expo date. A “fired” student receives 0% for the group presentation (of a possible 15%). They can still receive marks for their individual portfolio. Groups may “fire” a student member *only* if the following procedure has been followed:

- A. the group first raises the matter with their tutor and discusses possible approaches to resolving the problem(s);
- B. if this fails, all group members attend a meeting with the course coordinator in which all members have an opportunity to discuss the problem(s) that are causing friction, and plan a resolution;
- C. the student member is given a reasonable opportunity to show improvement (at least 1 week);
- D. if no change is observed, the group issues a memo of intention to fire to the student (copied to the course coordinator) before the date of the Expo.

Adapted from (Oakley et al., 2004)

Appendix C

Portfolio Coversheet

My evaluation of team function:

<input type="checkbox"/> Sophisticated	<input type="checkbox"/> Competent	<input type="checkbox"/> Under-developed
<ul style="list-style-type: none"> The team worked well together to achieve objectives. Each member contributed in a valuable way to the project The team worked with a high level of mutual respect and collaboration 	<ul style="list-style-type: none"> The team generally worked well together, with few moments of communication breakdown or conflict Most members contributed effectively to the collaborative effort Members were generally respectful of each other 	<ul style="list-style-type: none"> Team did not collaborate or communicate well Some members worked independently, without regard to team objectives or priorities Members often demonstrated a lack of respect for each other, or were uncooperative

Self-evaluation of my contribution to the activity

	Often	Sometimes	Seldom
I contributed constructive ideas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I listened to and respected the ideas of others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I compromised and cooperated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I took initiative where needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I came to meetings prepared	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I communicated effectively with teammates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I did my share of the work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I worked collaboratively towards team goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My biggest strength as a team member is:			
In future group work I aim to improve:			

I estimate I contributed _____ hours of focused work to this activity.

I estimate I contributed _____ % of the group's effort towards this activity.

Overall, I feel I contributed poorly / adequately / generously / excessively to this activity. *(Circle one)*

Above and beyond award:

I would like to recognize the following group member for going above and beyond their required contribution to this activity: _____

Appendix D

Expo Assessment Criteria

Each criterion below represents a category of assessment, within which there is flexibility to recognize the different forms and formats that student projects may have taken. Each is given a qualitative rank: absent, poor, adequate, very good, excellent; and overall comments are provided to contextualize the final grade.

Expo Project (team grade):

- **Accuracy:** Is the information presented in accord with academic opinion (or, if the topic is a controversial one: is the information in accordance with at least one school of opinion, or is there sound evidence for it, and/or have controversial aspects of the interpretation been highlighted)? Can the spokesperson satisfactorily account for why any generalizations have been made that could impact the precision of the historical information?
- **Audience:** Is there evidence of attempting to present information with clarity to a non-academic audience; has a specific potential audience been targeted (e.g., 10-year-old children), and are relevant and effective communicative approaches for that audience adopted?
- **Anticipation:** Is there evidence of anticipating the audience's prior understanding of the topic and of any likely questions or problems with understanding? Is there evidence that the presentation has been designed to respond to these?
- **Design:** Is the design effective at conveying historical information? Is the design appropriate to the assumed audience?
- **Purpose:** Does the presentation convey a clear historical message? Does it communicate the importance of this message in a clear way?

Personal Portfolio (individual grade):

- **Contribution:** Evidence of individual's contribution to thinking about, planning, and executing presentation. Students should include a self-evaluation of their contribution in the context of the team's goals and decision making processes, and an evaluation of team function. Students may nominate one group member for recognition 'above and beyond' proportional requirements. Self-nomination is permitted.
- **Reasoning:** Evidence of thinking, discussions and ideas about the nature of the presumed audience; what to include or exclude and why; design decisions; the purpose of the presentation; effective communication strategies; differences between academic and non-academic communication, etc.
- **Research:** For example, (a) Evidence of background historical research, including a bibliography of any sources used in preparing the presentation. The sources of any images used should also be provided; (b) Evidence of research into forms of [historical] communication, such as example websites, videos, images, to be used as inspiration; some evidence of discussion or ideas about which ones were found to be useful models and why.
- **Preparation:** Evidence of preparation for the activity, for example including brainstorming, drafts, sketches, script writing, and rehearsals relating to the presentation and/or the spokesperson role.

A Transformative Learning Approach to Child Protection with Applied Social Studies Undergraduates at a University in England

Debra Allnock
University of Bedfordshire

Learning child protection requires more of students than simply understanding 'what to do' in legislative and policy terms. Students must reflect on their implicit belief systems to effectively respond to child protection concerns as future professionals. This is an instructional article describing a scenario-based survey methodology to increase students' awareness of the ways in which they understand child abuse concerns. First, the important role of universities in readying students to work in the human services is acknowledged, along with a comment on the state of published literature in this area. Second, I set out the theoretical framework informing the approach, drawing on Worldview concept and Mezirow's Transformational Learning Theory, which underpins a social justice approach to education. Third, the instructional methodology is detailed. Finally, the outcome of the session is presented in a series of thematic reflections. The paper concludes that the methodology adopted is effective and powerful in supporting students to increase their awareness of their own worldviews and how they relate to broader national child protection policies and practices. Adequate preparation of students, planning for student incivility, and, importantly, self-reflection on the part of the lecturer are key tools that should be considered if lecturers plan to adopt this method.

Bourke and Mounsell (2016) explicitly call for child protection educators to address "implicit barriers" about child abuse which may get in the way of identifying and reporting child abuse. They state, "Education must go beyond policies and procedures and be holistic in addressing an implicit belief system in relation to child protection" (2016, p. 314). Their point is salient for any educators preparing students to work in the human services. The role of universities in readying students, as part of their future roles and responsibilities in relation to safeguarding and child protection, is critical to consider in the context of current government policy in England. This paper describes an instructional method for undergraduate students designed to address implicit barriers, informed by Worldview concept (Kolto-Rivera, 2000), and guided by Mezirow's Transformational Learning theory (1979) to support a social justice approach to teaching child protection.

English policy is clear that "safeguarding children and young people from harm is everybody's responsibility" (Department for Education, 2015, p. 5). "Child protection" in its most general sense refers to activity undertaken by professionals to protect specific children who are suffering, or are likely to suffer, significant harm. In England, child protection is conceptually embedded within a wider process referred to as "safeguarding," which includes protecting all children from maltreatment, preventing impairment of all children's health or development, ensuring that all children are growing up in circumstances consistent with the provision of safe and effective care, and taking action to enable all children to have the best life chances (Brandon et al., 2014).

Statutory guidance in England—*Working Together to Safeguard Children*—places a duty on all professionals working with children and families to act on concerns

(HM Government, 2015). The Children's Workforce Development Council (CWDC, 2010) classified the variety of roles within the "children and young people's workforce," including "core" workforce roles (those who work with children and young people all the time), as well as the wider children and young people's workforce (those who work with children and young people as part of their job role) (CWDC, 2010; p. 2). These roles span early years and childcare, sport and culture, justice and crime prevention, education, health, social, family and community support and youth services, and also front-line as well as management and leadership roles. Regardless of degree requirements, all of the children and young people's workforce have similar responsibilities in relation to safeguarding that is set out within *Working Together to Safeguard Children* (DfE, 2015).

A literature search was conducted to identify papers concerned with teaching, training, and pedagogy in the field of child protection and safeguarding within university contexts. Only one paper was found that related to the teaching of child protection to students on traditional degree pathways such as Applied Social Sciences, degrees which grant students qualifications to work in a range of roles in the human services but do not qualify them to work as registered social workers or teachers, for example. This paper found that child protection is inconsistently delivered and deficient in content covered, with particular weaknesses in building student confidence in responding to abuse in everyday professional practice (Rossato & Brakenridge, 2009).

Other papers were identified relating to teaching child protection in undergraduate and post-graduate degrees which confer a qualification on students to practice as social workers, teachers, nurses, or midwives, for example (see, for example, Baginsky & Hodgkinson, 1999; Baginsky & MacPherson, 2005; Bruce &

Whincup, 2012; Cooner & Hickman, 2008; Farrell & Walsh, 2010; Halsall & Marks-Maran, 2014; Keys, 2016; McKee & Dillenburger, 2012; Mirick, 2016; Pack, 2016; Tarr, Whittle, Wilson, & Hall, 2013). Among these disciplines, pre-service training in qualifying professional academic degrees in university settings is similarly found to be underdeveloped, patchy, inconsistent, and inadequate. Bourke and Mounsell (2016) argue that implicit barriers such as a person's belief system about child abuse produce barriers to reporting and responding to child protection concerns. Despite this, the review shows that most pedagogic papers on child protection focus on content of delivery, not reflective methods used, and none explicitly note the use of a transformational approach to teaching and learning to increase student awareness of their beliefs and values about child abuse and protection.

The findings from this review, then, suggest that pedagogical methods used to support teaching and learning for students enrolled specifically in non-qualifying academic programmes (such as Child and Adolescent Studies or Childhood and Youth Studies, Applied Social Studies, Health and Social Care or Criminology, for example) are generally overlooked. There is a more specific neglect of reflective methods related to child protection with university students, as is clear in the literature on qualifying programmes. It is, therefore, imperative to begin a dialogue about these methods in these contexts. Students within these types of programmes will go on to comprise a significant proportion of roles within both the core and wider children and young people's workforce, and they will hold important responsibility for safeguarding children. In this respect, this paper is unique and original and aims to begin this much needed dialogue.

Theoretical framework

The underpinning theories that framed the development of the pedagogical approach outlined in this paper draw on the concept of "worldview" to provide the justification for focussing on students' implicit beliefs and value systems. "Transformational learning theory," which informed the development of my pedagogical approach, is then considered as a key method for teaching with the goals of social justice in mind.

Worldview Theory

Students come to the university guided by implicit beliefs that powerfully influence the way they think and behave. Kolto-Rivera (2000, as cited in Kolto-Rivera, 2004) defines a worldview in the following way:

A worldview is a way of describing the universe and life within it, both in terms of what is and what

ought to be. A given worldview is a set of beliefs that includes limiting statements and assumptions regarding what exists and what does not (either in actuality, or in principle), what objects or experiences are good or bad, and what objectives, behaviors, and relationships are desirable or undesirable. A worldview defines what can be known or done in the world, and how it can be known or done. In addition to defining what goals can be sought in life, a worldview defines what goals should be pursued. Worldviews include assumptions that may be unproven, and even unprovable, but these assumptions are superordinate, in that they provide the epistemic and ontological foundations for other beliefs within a belief system (adapted from Koltko-Rivera, 2000, 2).

Worldviews are made up of three distinct types of "beliefs" (Rokeach, 1973): existential beliefs which are about the nature of what can be known or done in the world (for example, "There is only one God."); evaluative beliefs which are those that describe human beings or actions in evaluative terms (for example, "Child abusers are evil."); and pre- or proscriptive beliefs (values) which are those that describe the preferred means or ends (for example, "The state should stay out of family life."). Evidence from comparative cultural studies supports the notion that culture is antecedent to, and thus forms, cognition, affect and behaviour (Lonner & Adamopoulos, 1997). Ethno-cultural studies also demonstrate that values that are central to the self-influence cognition, affect, and behavior (Verplanken & Holland, 2002). Inter-group comparative research (for example, with psychotherapists and counselors) has examined differences in attitudes, behavior and anticipated behavior (Kagee & Dixon, 2000) and find relationships between worldview and these outcomes. Studies of religion and religious experience also find relationships between religious orientation and a range of social and political attitudes (Wulff, 1997). Kolto-Rivera (2004) offers a synthesized model of "worldview," comprised of seven "groups" of beliefs (human nature, will, cognition, behaviour, interpersonal, truth, world and life) with each group made up of two or more dimensions, which in turn detail possible "positions" that a person may hold in relation to the dimension in question. It indicates the significant complexity of worldviews that are likely to be brought by students (and lecturers!) into any classroom.

Child protection, as a subject, presents a high degree of potential for these complex worldviews to collide. Parenting provides an excellent example in which students are rarely dispassionate within classroom discussions. All students have experiences of being parented, and some with parenting their own

children. Recent neurobiological research has found that an important predictor of parenting behavior is how parents were parented themselves (Lomanowska, Boivin, Hertzman, & Fleming, 2017), which supports the idea of worldview theory. There is, however, no consensus on what constitutes “good enough” parenting (Brandon et al., 2014). The variety of parenting styles that exist alongside this general lack of agreement about parenting at least partly explains why neglect is so difficult to address (Allnock, 2016).

More generally, while there is increasing social consensus in the United Kingdom of the point that child abuse is fairly common (Bentley, O’Hagan, Raff, & Bhatti, 2016) and on what constitutes the major forms of child abuse (Fond et al., 2015), there is much less consensus on how these are actually defined, what causes them, and how they should be responded to (see, for example, Bentley et al., 2016; The Children’s Society, 2010; Fond et al., 2015). Studies on public attitudes towards child abuse and protection demonstrate variation both cross-nationally (Sajkowska, 2007) and within individual nations (The Children’s Society, 2010; Fond et al., 2015), as well as by age and gender (The Children’s Society, 2010). Lindland and Kendall-Taylor’s (2013) compelling attitudinal work on child maltreatment found significant gaps between child protection “expert” views and those held by the general public in relation to child maltreatment.

The general public, for example, most commonly recognize sexual and physical abuse but fail to acknowledge the more widespread maltreatment such as neglect and emotional abuse that is common in society. The public tends to personalize blame, attributing abuse to personal deficiencies, whereas expert views consistently highlight structural explanations. In relation to the ways that abuse impacts children, the public similarly looks to individual factors, believing that abuse can be overcome through emotional effort, willpower and self-management, whereas experts cite neurobiological research that documents the ways that maltreatment changes the architecture of the brain. The public tends to associate types of abuse with social class, although research tells us that all types of abuse occur across all socio-economic strata. These are clear examples of “implicit theories” (Bourke & Mounsell, 2016) or worldviews that must be addressed in educational contexts in order to prepare students to effectively work with children and families.

The significance, then, of worldviews in the context of teaching child protection cannot be understated. Worldviews must be engaged with in order to develop those key skills required by those intending to work in the children and young people’s workforce, including the ability to listen and build empathy, respect, observation and judgement; the understanding of context, self-awareness and self-understanding; the ability to analyze

objectively; the confidence to challenge one’s own (and others’) practice; and the development of appropriate relationships with children and their families (CWDC, 2010). It is imperative to address these values in order to ensure that students are equipped to act legally, ethically, and morally within the context of child protection and safeguarding practice within the United Kingdom.

Social Justice and the Possibility of a Transformational Learning Approach

Teaching child protection ultimately requires a “social justice” approach to education. It is a complex social problem framed by social, relational, and individual contexts that inter-act and reinforce one another. The purpose of a social justice approach to education is to support the full and equal participation of all groups in society (Bell, 1997). This requires preparing and supporting students to critically examine oppression at institutional, cultural, and individual levels in order to search for opportunities for social change (Hackman, 2005). Students must first be able to critically reflect on their own beliefs and values in order to transcend individual experience. This critical reflection can be facilitated through classroom activities.

The teaching of child protection, then, within a traditional informational approach sits uncomfortably. An “informational” approach to learning is the process by which new information is added to that which is already known/ possessed by the learner (Baumgartner, 2001), an approach referred to by Friere (1982) as the “banking model” where “knowledge deposits” are made to learners by teachers. This type of approach changes “what” we know, is additive in nature, and brings external knowledge into an existing worldview (Baumgartner, 2001), but it does not always require critical engagement. There is, arguably, some learning in child protection and safeguarding which fits within this model, such as disseminating knowledge to students about the legal and policy frameworks which guide practitioner responsibilities. However, a considerable amount of professional activity in the child protection field is based on knowledge which is fluid, constructed, relational, and at times ambiguous, requiring interpretation and, thus, what has frequently been referred to as professional judgment rather than a “tick box” cultural response (Munro, 2008).

A transformational approach, on the other hand, “is the process of effecting change in a *frame of reference* (Mezirow’s emphasis)” (Mezirow, 1997, p. 5). This frame of reference may suitably be aligned to the notion of “worldview,” where the transformational approach addresses the way a learner views the world in which they live. Mezirow (1997) argued that we tend to strongly resist and/or reject ideas that contradict our preconceptions. In order to jar learners into a new way

of thinking, “something” must occur that grabs the learner’s attention. Mezirow’s cognitive/rational approach to this form of transformational learning emphasizes reflection upon previously held assumptions on the world and how it operates. Moreover, Mezirow argues that a reflective discourse with others is required to assist in the transformative process, reflecting “communicative learning” in contrast to “instrumental learning” (Baumgartner et al., 2003, p. 24). Reflections on assumptions which are embedded in social discourse thereby support the creation of new understandings.

Mezirow (2000) proposed a ten-step process related to transformation: “1) disorientation; 2) emotional reaction; 3) assessment of presently held assumptions; 4) understanding that one is not alone; 5) exploration of new roles; 6) creating a plan of action; 7) gaining knowledge for the plan; 8) trying on the selected new role; 9) development of confidence in the new role; and 10) integration of the new perspective into one’s life.” (p. 22). The key to all of these steps is critical reflection and reflective discourse, both of which explicitly underpin the approach tested out in the activity described in the following sections.

Unit Description and Composition of Student Cohort

The unit under discussion in this article is formally titled Child Protection: Critically Analyzing Policy and Practice. It remains actively delivered as a core, required unit for third (final) year students enrolled on a Child and Adolescent Studies program (delivered within an Applied Social Studies Department) at a university in England. Students enrolled on other programmes in this Department can elect to take the unit. This paper describes a single session that was delivered within the last three years (precise year of delivery is withheld to strengthen anonymity of the session described). This session was explicitly designed to link to a summative assessment where students were required to reflect on their values and experiences in relation to a child protection case study.

There were 101 students enrolled on the unit. Enrollment data shows a highly diverse student group in terms of age, which ranged from 18 to 54, with an average age of 27.5. They were also ethnically diverse. Fourteen students identified as Asian: 10 as Pakistani, 2 as Bangladeshi, 1 as Indian, and 1 as “Other” in the Asian category. Four students identified as Black African, 12 as Black Caribbean, and 1 as “Other” Black. Twenty-five students identified as White, and 3 identified as having mixed heritage White/Black Caribbean). Three students were enrolled as overseas/international students from countries both within and outside of Europe, with the remainder

enrolled as home students. A majority were female (n=96), and 10 reported a disability. Fifty students were enrolled in the Child and Adolescent Studies program, 20 in the Applied Social Studies program, 11 in the Criminology program, and 21 in Health and Social Care.

Session Aims and Outcomes

The session under discussion in this article was designed to support students in preparing to achieve one of the core outcomes of the unit: to analyze the dilemmas and uncertainties inherent in this field and arrive at viable and appropriate strategies for addressing these. The assessment criteria aligned to this outcome stipulates that students must apply an understanding of the impact of personal attitudes and values on judgements in this field.

Prior deliveries of this unit incorporated two sessions devoted to supporting student reflection and using a number of practice-based scenarios in class to promote discussion and debate. In developing the session further, the aim was to facilitate the first and second steps in Mezirow’s process of transformation: 1) disorientation, and 2) elicitation of an emotional reaction.

At the time this approach was developed, I had found no papers to help inform the development of the method. As I was writing this paper, however, I identified a theoretical paper exploring the potential of transformational theory in practice which described the use of a similar approach (Christie, Carey, Robertson, & Grainger, 2015). The paper included a discussion about an instructional approach designed by the first author that used a similar survey method to assess students’ perspectives on a range of controversial issues such as euthanasia, immigration and abortion, but which similarly (to my method) sought to trigger ‘disorienting’ dilemmas in accordance with Mezirow’s transformational learning framework. While Christie’s general approach and aims were similar, the method used to capture survey data was slightly different. Where relevant, Christie’s approach will be considered in relation to the method developed here. The aims of the session are presented below, along with a description of the teaching method designed to achieve each aim.

Aim 1: Establish and capture individual student perceptions in relation to a number of child protection scenarios.

Drawing on previous colleague’s use of real-world scenarios to stimulate student reflection, I developed a survey using Qualtrics web-based survey software and incorporating 10 different scenarios, and I distributed this to students a week in advance of the session. Previously the scenarios were introduced in class; however, I felt that

participation might be increased through the use of an anonymous survey and that the impact of seeing the results would be greater. The survey was distributed via the university Blackboard system as an “announcement,” which was then automatically forwarded to student email accounts. I invited students to participate in an anonymous voluntary survey about their understanding of possible child protection scenarios. I indicated that the survey would not take too long to fill out, as well as that the information would be used for pedagogic purposes and would guide the session the following week. A detailed information sheet was included at the start of the survey which described the nature of the scenarios as sensitive and which noted that some students may find them upsetting. Students were informed that they could skip any scenario/question pair they wished, or they could choose to exit the survey at any time without penalty. I requested their consent to participate, which they had to provide in order to progress on to the first scenario.

In the survey, I asked students to read and reflect on each scenario and choose one response that they felt best described them. An example of one of the scenarios is provided below:

By mutual agreement, a thirteen-year-old girl is having regular sexual intercourse with a thirteen-year-old boy. He gives her money and protects her from other boys. She says that she enjoys this relationship.

Students were provided with the following choices for this scenario:

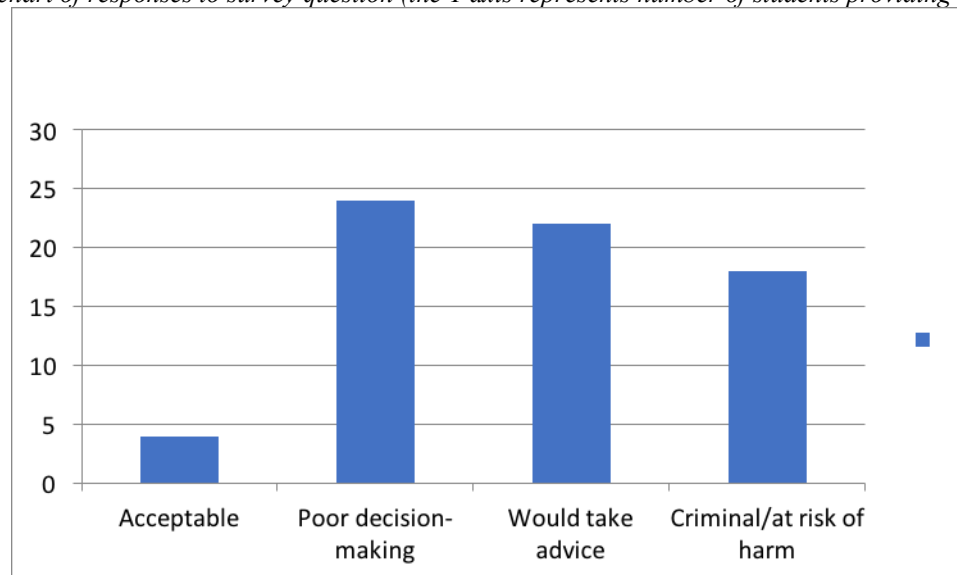
1. The scenario is acceptable behavior.
2. The scenario demonstrates poor behavior/decision-making by the female child.
3. Would have to take advice.
4. The scenario is criminal and/or the child is at risk of significant harm.

Christie et al.’s (2015) approach was structured slightly differently. First, Christie used a paper-based survey in class, turning the results into power-point slides then and there while the students were asked to predict the results on another sheet of paper. The survey posed statements on a range of controversial issues (for example, “Euthanasia should be legalized”), and responses were captured through the use of a Likert scale (for example, “Agree or Disagree”). The survey used in my teaching session could be adapted to incorporate a Likert scale in a similar way for single statements devised for each scenario.

Aim 2: Place those perceptions in context with the perception of others (to trigger “disorientation” and elicit emotional responses).

Before the session, I analyzed the responses using basic descriptive statistics and produced charts illustrating the students’ responses in aggregate (Figure 1).

Figure 1
Bar chart of responses to survey question (the Y axis represents number of students providing a response)



On the day of the session, students were reminded what the scenario was and the possible responses to the question. In keeping with the tenets of transformational learning theory, I encouraged collaborative discussion among students before showing them the results, giving them time to consider what they thought the findings would be. Because of the physical setup in the classroom, my method diverged from Christie et al.'s (2015) method, which broke students into groups, provided them with hard copies of the survey and asked students to "predict" the results and document their answers, individually and then collectively. My classroom was "lecture hall style" and very large, preventing the facilitation of groups numbering more than a few students. In future, it would be beneficial to follow Christie's approach to facilitate broader collaborative discussions and capture data on student predictions for later analysis.

Following illustration of the actual student cohort responses, I encouraged students to collaboratively reflect on their own response to the scenario and discuss what those findings imply, including consideration of the different beliefs and values they hold about what constitutes a child protection issue. Like Christie et al. (2015), I facilitated a debate about the "sources" of values aligned to different responses (for example, students' own childhood experiences, cultural differences in how childhood is constructed, students' own experiences of parenting, etc.). I then took an additional "step" following presentation of the student survey responses, diverging from Christie et al.'s (2015) method: I presented slides that detailed relevant legislation, guidance and policy, theory and research related to each scenario. I encouraged reflection on how some of the student responses that would not be appropriate, given current practice and legislation, would impact on the children and families affected by the scenario. This allowed students to discuss collaboratively why certain responses are inappropriate and internalize contemporary practice responses. My goal was that students would begin to understand how they, as individuals, fit within a larger system of professional response.

Thematic Reflection on Outcomes of the Session

A number of important themes emerged which are discussed here including the observation of a variety of worldviews, the disorientation and emotional reactions observed; the importance of collaborative discussions; and my own role within this process.

The Survey: A Multiplicity of World Views

A high survey completion rate was obtained: 68 students completed the survey representing 67% of the student cohort. This was surprising given that the survey

was voluntary, carried no contribution to their overall marks, and was not designed as a "formative assessment." Taylor's (2003) review of the literature on transformation learning suggests that "value-laden" or controversial course content "provoked reflection...more so than other content" (p. 156), so it is possible that the topics contained within the survey ignited student interest more so than a survey on something less controversial. Since it was the start of the term, student motivation may have been higher than it might have been later in the year. The responses to all 10 scenarios demonstrated significantly heterogeneous results. Across all examples, there was a significant proportion who said they "would take advice" in relation to the scenario, indicating also a high degree of uncertainty. Including this as a response choice clearly had some limitations as it allowed students to "opt out" of stating their choices. This could be removed to effectively "force" students to choose an option, unless a Likert scale approach is adopted as previously suggested.

Disorientation and Emotional Response

My aim to "disorient" students and "elicit emotional responses" from them was evidenced in a range of observed reactions to the survey results. First, I observed an unusual increase in student contributions during the session in comparison to the first two lecture sessions of the same teaching year. Second, there was a notable energy and buzz in the room with students sometimes talking over one another to make their points. Disorientation manifested in facial expressions showing surprise and shock, head-shaking, gasps, and laughter when the full findings were revealed. Some students verbally expressed their surprise, while one student stated that they could not believe that people "believed what they believed." These sorts of responses were utilised as anchors for discussion to begin challenging students on what appeared to be entrenched views about child protection.

The disorientation and emotional reactions observed were the kind that I had anticipated and were, on the whole, manageable within the context of a large class size. However, one particular scenario ignited significant dissent among some students in reaction to another student's contribution. This reaction was a powerful demonstration of "disorientation" in the context of challenging worldviews, and it also illustrates the dangers involved (Finlay, 2008).

A debate occurred about whether parental principles and practices of "social nudity" or "naturism" present a risk to children. The initial discussion was lively and reflected a depth of thinking among the students who were grappling with their ideas. In response to a number of students who voiced their opinions that "naturism" is always harmful to children,

a White South African student made the argument that social nudity is not always harmful to children and is often based in historical and cultural traditions. The student then shared an example of South African tribal cultures wearing revealing attire. This example elicited highly volatile reactions from many of the Black African students in the class, and what began as an intellectual discussion quickly deteriorated into arguments and intimidation.

There are two complex issues to address in relation to what occurred: 1) the root of student anger, and 2) the incivility in the classroom. It was clear through the incident and discussions with students in the following weeks that at least some of the Black African students felt re-victimized through a student's use of what they saw (rightly or wrongly) as an apartheid discourse. A social justice approach to education should orient us to understand and challenge ideas based in historical, social and political oppression (Hackman, 2005). Missionary and colonial mechanisms of oppression in South Africa included discourses that sought to "civilize" the "primitive natives," which included the introduction of Western styles of dress (Ramaite & Mdhluli, 2008, cited in Grant & Nodoba, 2009). While the point being made by the White South African student was a relevant and useful one in the context of our discussion on child protection, the student inadvertently tapped into deeply held political and historical anxieties, and this required acknowledgement by the lecturer.

At the same time, the wider reactions to the student's comment—however much other students disliked or felt victimised by what was said—demonstrated "incivility" in the classroom that similarly needed to be addressed. Clark (2008, p. 38) defines incivility as "disregard and insolence for others, causing an atmosphere of disrespect, conflict, and stress". The verbal accusations levelled at the student, delivered by multiple students and in combination with shouting and threatening postures, can be described as "intimidation," according to Feldman (2001), given the potentially serious impact to the student, as well as other students in the room (Lampman et al., 2009). While the student "intimidators" were angry with the other student's example, which for them reflected broader, socio-political histories of oppression, the incivility removed all possibility of a productive discussion based in a social justice approach.

Following the session, I revisited this dual problem in the following week's lecture by posing another controversial scenario, putting them in the role of a family support worker having to engage with a family with extreme views. Students were required to work together to solve the dilemma and devise a plan for how they would engage with the family using professional values and judgments. The aim was to situate students in a professional role so that they could reflect on how they would have to react professionally in a situation that made

them uncomfortable. Many students "got" the point that emotive and threatening reactions within such a professional context would be unacceptable in the workplace. Interestingly, some of the students contacted me to apologize for the outbursts. The student that initially made the contribution also came to discuss with me why her example caused so much distress. This conversation allowed her to reflect on her own social location in relation to the other students and to gain a broader perspective on debating these types of controversial issues. The university context is an important place to support students to explore worldviews in this way and should be a safe space to do so.

This example is not shared with the intention of dissuading other lecturers from using this type of approach. It is shared to disseminate lessons to lecturers on how to prepare, respond, and reflect on their own roles in the process, even when sessions do not go the way they are planned. In any context where issues of social justice are being addressed, there are likely to be collisions of worldviews, but this is not a reason to avoid addressing them (Hackman, 2005). The process of transformation requires students to grapple with difficult issues to allow learning to emerge, and despite the challenges encountered in this example, the students were clearly engaged at both personal and intellectual levels. Also, the session remained an active topic of conversation among students for the weeks that followed, illustrating how impactful it was. Following my experience, a quote by Brookfield (1990, p. 178) feels particularly apt:

Questioning the assumptions on which we act and exploring alternative ideas are not only difficult but also psychologically explosive...[it] is like laying down charges of psychological dynamite. When these assumptions explode...the whole structure of our assumptive world crumbles. Hence, educators who foster transformative learning are rather like psychological and cultural demolition experts.

The Importance of Collaborative Discussion in Challenging Worldviews

While the emotional reactions and disorientation so clearly observed demonstrated that students were engaged and beginning to grapple with new ideas, it is fruitful to consider in what sorts of ways students' worldviews might have been challenged. The emotional reactions and disorientation which occurred are associated more clearly with individual student responses and internal reaction to new ideas in the immediate sense following presentation of the survey results and later, the legislative, policy, and practice context. Transformational learning, however, also requires collaboration and feedback. Providing the

space for students to collaboratively discuss and negotiate the scenarios proved powerful. At least some students shared with others what their responses to the survey had been, prompting others to do the same. It seemed, then, that at least some students entered a “problem-solving” mode in order to come to some agreement about the scenario. I could see other students less vocally engaged but clearly listening to their fellow students and processing the discussions. I noted that some students conceded that their worldview in relation to a given scenario may be overly harsh or lenient, while some students remained stubbornly wedded to their initial responses. These are merely observations, however. Changing assumptions, or at least having assumptions challenged, is a complex process and difficult to measure.

In relation to the final stage in the session (sharing the legislative, policy, and practice contexts), students were again given the space to reflect collaboratively but in a way which forced them to consider how the scenario would directly impact them as professionals. A particular example is worth mentioning to demonstrate this. One scenario was concerned with “smacking,” which, in the UK at the time of this article’s publication, is illegal except where smacking amounts to “reasonable punishment” (see Section 58 of the Children Act, 2004). “Reasonable punishment” invites interpretation, but the law is clear that severe punishment involving infliction of wounds, actual bodily harm, grievous bodily harm, or child cruelty is illegal. Despite the law, smacking amounting to ‘reasonable punishment’ is highly contested in the UK. This scenario offered students ample opportunity to debate the issue while highlighting a plethora of views given that discipline (using smacking or not) is intimately tied to parenting practices. Students used everyday examples to debate the notion of “reasonable punishment,” with discussions drawing on arguments about child versus parental and/or adult rights. Encouragingly, students were even drawing on theories and frameworks they had learned in their other units to contest or support the debates emerging within the discussions. Students noted their discomfort in relation to this and other scenarios, which clearly have raised their awareness of the challenges they may face in professional practice contexts.

The Lecturer’s Role

My interest in promoting transformative change among students of child protection cannot sit outside my own personal reflection on the both the task and my own experience in delivering the session. It is not only the students, but also the lecturer, who comes to the session with their own worldviews and a social justice perspective requires the lecturer to also reflect on

themselves and the personal qualities that inform their practice (Hackman, 2005). My own reflection on the session involved considerations of white privilege (I am White) and self-interrogation about the scenarios and the national context which defines them – or not – as child protection issues. Both of these reflections helped me to acknowledge the historical, social and political contexts that underpinned the student reactions and to consider ways to intellectually challenge students in the future who share views that may be experienced by others as insensitive or ignorant. This has to be balanced, however, against the need for a place of safety to facilitate dialogue, which is a key principle in both transformative learning and social justice education. In the future, I would consider using an inter-group dialogue technique to cultivate discussion and exchange of ideas and experiences across group differences, a model proposed by Zúñiga et al. (1997).

Conclusion

This instructional paper discussed my experience of designing and implementing a transformational learning activity that aimed to raise student awareness of their world views in relation to child abuse and protection. The aim was to trigger “disorientation” and “elicit emotional reactions” (the first two steps in Mezirow’s framework for change) for the purposes of engaging students to reflect on their assumptions and worldviews. I am confident, as was Christie et al. (2015), that this method is effective in meeting this aim. Worldviews were clearly ‘challenged’ through student recognition of different perspectives and were more powerfully challenged in the context of collaborative discussions with other students. “Challenged” worldviews manifested in lively debates, disagreements, students asking more questions, and problem-solving discussions. “Changed worldviews” are much harder to assess and, indeed, are not even expected to occur this early within Mezirow’s framework, but these steps represent important stages in a journey towards transformation. The activity supported students to acknowledge that differences in values exist. Moreover, the activity placing student perceptions in context with child protection policy and practice in England supported students’ understanding of how their own values may be at odds with contemporary theory and research in this area. The activity illustrates how students can become aware of the assumptions they hold and question their validity, particularly in relation to the social and political context in which they live.

The activity also highlights the dangers of reflection as highlighted by Finlay (2008). While the incivility that erupted was, at the time, uncomfortable, frustrating, and difficult to contain, it became a positive

platform for further exploring professional responses in the context of the human services. Students, when they go on to become practitioners in their fields, will inevitably be working with families whose worldviews may significantly differ from their own. The skills and capabilities required for working in the children and young people's workforce demand professionalism and non-judgmental approaches, and the emotional responses provide opportunity to support students to make links between their behaviors and responses in the workplace. I did encounter a challenge in addressing the very real anxieties held by the student, however. Hackman's (2005) advice for effectively teaching social justice is for lecturers to be aware of the multi-cultural dynamics of the classroom where social identities impact on dialogue. Frameworks such as Zuniga et al.'s (1997) can assist in facilitating discussion across differences, not only in relation to ethnicity, but also in generating positive discussion across other forms of social identity. Finally, continued and on-going reflection by the lecturer is important in effectively acknowledging inter-group difference and can aid in providing a balanced, rather than reactive, response to difficult conversations. Although whistles, bells, and riot gear might have helped to immediately contain the disagreements described here, they are inadequate accessories for addressing the real anxieties that emerge in conversations about social justice.

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Effects of Service Learning on Concept Learning About Small Group Communication

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Interest in service learning has increased in the past two decades, partly due to recent accumulation of knowledge about its beneficial outcomes to participants and society. This manuscript describes a small group basic communication course taught in a service learning format at a small liberal arts college. Qualitative comments as well as quantitative data from an anonymous survey ($n = 112$) indicate that the small group basic communication service learning course was beneficial to students in terms of aspects including personal development, clarification of career goals, a sense of connectedness with the community, and a sense of fulfillment in assisting others.

Interest in service learning has increased in the past two decades, with hundreds of colleges and universities across the nation implementing service-learning courses into their curriculum. This trend is in part due to recent accumulation of knowledge about its beneficial outcomes to participants and society (Carlan & Rubin, 2005; Eyler, 2002; Gray, Ondaatje, Fricker, & Geschwind, 2000; Tannenbaum & Berrett, 2005). Although some differences among scholars exist, most agree that the beneficial outcomes of service learning include (a) enhancement of learning of in-class material, (b) personal development, (c) fostering of civic responsibility, and (d) benefits to the community (Eyler, 2002; Madsen & Turnbull, 2005; Waterman, 1997). Furthermore, the authors of a more recent meta-analysis study of service learning in higher education outcomes state that their results provide evidence that community service enhances learning by improving academic understanding of subject matter, skills learned, and ability to apply knowledge and reframe complex social issues (Novak, Markey, & Allen, 2007).

The purpose of this study is to describe a small group communication course taught in a service-learning format at a small liberal arts college. Students ($n = 112$) were surveyed regarding their service-learning experiences and their impressions of the effects of service learning on various aspects of learning and self-awareness.

Review of Literature

Service Learning

Service learning is a concept that incorporates active experiential learning with community service. The value of service to the community has long been part of the public discourse of the U.S. since as early as 1810 in the writings of Thomas Jefferson and philosopher William James (Waterman, 1977). As for the experiential learning component of service learning,

philosopher and educator John Dewey advocated active discovery of ideas by students themselves as an approach to effective education (Madsen & Turnbull, 2005; Waterman, 1977).

In the 1960s a number of state-government internship programs evolved involving urban or rural studies semester and summer programs. The Kennedy administration saw service learning as a way to tear down barriers between academics and other sectors of society (Jacoby & Associates, 1996). In the 1980s and 1990s, service learning developed conceptually, leading to such organized lists as "Principles of Good Practice for Combining Service and Learning" by the National Society for Experiential Education and "Critical Elements of Thoughtful Community Service" by the Campus Outreach Opportunity League (Katula & Threnhauser, 1999). More recently, service learning has acquired more support and acknowledgment, as reflected in the Clinton administration's emphasis on service learning, urging academicians to share their knowledge and resources with their community (Jacoby & Associates, 1996).

Enhanced learning of in-class material was noted by various authors who summarized student feedback to service-learning assignments in terms of learning about specific content areas such as public relations (in a public relations service learning project); learning about such general communication concepts and skills as team work, leadership, critical thinking, and the service learners' gain of an holistic understanding of how the content related to the social contexts in which they were placed (Deruosi & Sherwood, 1997; Lubbers, 1998; Tannenbaum & Berrett, 2005). Similarly, personal development was noted as an outcome by authors gathering information inductively from students who reported that they experienced personal growth in terms of becoming a role model, becoming more responsible, clarifying their value systems, clarifying career goals, and acquiring greater self confidence (Kauffman, Martin, & Weaver, 1992; Tannenbaum & Berrett, 2005). Fostering civic responsibility was

another induced outcome of service learning: Students reported commitment to social values, future plans to volunteer, efficacy to enable social change, commitment to promoting racial understanding, and preparation to take on the role of an engaged citizen (Bringle, Hatcher, & Games, 1997; Deruosi & Sherwood, 1997; Eyler, 2002; Madsen & Turnbull, 2005). More recently, service learning has been found to have a positive effect on the retention and academic success of a particular at-risk student population: first-generation college students (McKay & Estrella, 2008). Finally, an outcome that is reported by the participating organizations, rather than by the students, is that service learning brings about a value-added dimension to society, that the volunteers' efforts have indeed bettered society, albeit in varying degrees (Deruosi & Sherwood, 1997; Tannenbaum & Berrett, 2005).

The Centrality of Communication in Higher Education

Concurrently, the centrality of communication skills to a successful college education is becoming inevitably clearer to academia (Morreale & Pearson, 2008). On the one hand, mandates from members of society to reduce "mall speak" and incoherence in college graduates and to increase communication effectiveness (Dannels, 2001; Hobgood, 2002; Schneider, 1999; Zernike, 1999) are increasing pressure on academicians and college administrators to focus their attention on improving students' communication skills. On another front, clear communication is not only considered one of the most important skills in the corporate world, according to a survey of Fortune 500 companies (Morreale & Pearson, 2008), but it is also considered central in preparation for professional life (Morreale & Pearson, 2008; Parvis, 2001), as well as in fostering skills necessary for citizenship and participation in the democratic process (Morreale & Pearson, 2008).

Additionally, a body of scholarship within academia itself also has shifted the paradigm from that of viewing communication as merely the vehicle of content matter to that of regarding it as an important part of the learning process that enables and furthers students' critical thinking abilities (Coppola & Daniels, 1996; Palmerton, 1992; Silberman, 1996). The increasing awareness among various societal entities extolling communication's role as central to a college education has resulted in institutions of higher learning focusing new attention and being charged with being accountable for teaching effective communication skills to college students (Morreale & Pearson, 2008).

Among the various types of communication skills, small group communication is perhaps the most widely sought skill due to its ubiquity in the career world and society in general (Walton, 2010; Witmer, Silverman &

Gashen, 2009). The college small group communication course typically teaches such core concepts as group cohesion, individual roles (both positive and negative), leadership, conflict, decision-making, and problem-solving, as well as avoidance of groupthink, as core concepts (for example, see Beebe & Masterson, 2015, or Hirokawa, Cathcart, Samovar, & Henman, L.A., 2002). Learning about the various roles people can play in small groups, conflict approaches and resolution styles, and leadership styles and skills, as well as listening skills, are important in small group communication. In order to acquire these skills, an indepth understanding of the theory behind the skills is important. Additionally, communication programs are uniquely situated to include this pedagogical approach in their courses due to the fact that the course content, communication, is the focus and medium of most service-learning programs (Novak et al., 2007). For these reasons, many basic courses either focus primarily on small group communication or at least include it in the curriculum; for example a large East Coast university offers over 70 sections of the basic course each year focusing on small group communication.

Project Description

The author taught a small group communication course at a small liberal arts college over a number of years. After teaching the course in the traditional methods with conventional in-class activities, lectures, and assessments of learning during the first couple of years, the author, encouraged by a conference workshop presentation on service learning, decided to teach the course as a service-learning course. Two main issues prompted the author to transform the traditional small group communication course into a service-learning course. At first there was a sense of disconnect between the college students and the local community. The college was situated in a small historical town, which tended to be conservative and proud of its past. For the most part, the city adjusted begrudgingly to change, and there was certain sense of tolerance of the young college students from diverse backgrounds. Additionally, although some students had financial and familial hardships, many of the students seemed to be oblivious to the privileges they enjoyed due to their relatively affluent socio-economic status and stable family backgrounds. Given these issues, the author sought to bring about change by fostering a sense of connectedness with the community and an enhanced awareness among the college students of the life privileges that they enjoy relative to others. The author also wished to provide opportunities for students to feel the satisfaction resulting from volunteering for others, with the hope that this attitude would continue throughout their lives. The service-learning course

used the same text as the traditional course to teach the same set of concepts and skills, but a requirement of providing at least 10 hours of service to a community organization was added. This new format has been taught for nine years.

In preparation for the course, the author worked with the campus COAR (Community Outreach Activities Resources) organization to learn about the various volunteer opportunities available. The agency also provided a standard service-learning contract, to be signed by the student, community organization, and professor, so that the type of volunteer work and conditions were clarified between all parties at the project's onset.

To prepare students for the project, they were presented with a lecture on experiential learning to provide the "big picture" for how the project and related assignments were designed to help them learn more about the course content, small group communication. Student groups of four each were designated by the author, based on student information sheets filled out on the first day of class. The sheets gathered information about students' names and majors, as well as hobbies, which the instructor then used to manually sort into piles to create diverse groups, e.g., a group consisting of an engineering major male student, a studio arts female student, and an English major male student. The goal was to make the groups as diverse as possible since the ability to work with people with diverse ideas and backgrounds is important to foster among students. The literature states that, although heterogeneous work groups initially and typically experience more trouble, they eventually end up producing better outcomes, such as more flexibility in options and more ways of looking at a problem (Beebe & Masterson, 2015).

Students were provided with a presentation by the COAR office with handouts describing various volunteer opportunities and contact information, some of which varied from semester to semester. As new agency contact was made, which resulted in novel volunteer opportunities, the COAR representatives brought an updated list of opportunities to the presentation. For example, in one semester students could volunteer at a Boys and Girls Club, an animal shelter, a women's shelter, and a nature conservancy organization, while the next semester presented opportunities for same these organizations with the addition of the YMCA or Day Break (a center for disabled youth). After providing them with handouts, student groups were then allowed to discuss and decide among themselves which volunteer opportunity would be most appropriate for them, given their schedules and interest areas. Student groups were assigned to volunteer at the same location and were encouraged to work together as much as possible to fulfill their hours (ten hours per semester). The rationale for this was to provide opportunities for students to engage in small group communication, the focus of the course. In doing

so, students could accumulate experiences to analyze for their journals, as well as for their small group analyses presentations later.

Assignments were designed to allow students to reflect and apply communication theories to their experiences. First, it was important to check each group's progress. To keep students on track, students were assigned to give a progress report on their volunteer work during the first half of the semester. During group presentations, students reported their progress made, as well as challenges met in attempting to make progress. Prompts included the following:

- Describe the organization, its mission, and the reason your group decided to volunteer at that organization.
- What was your service-learning goal for the organization as a group?
- What was your goal for yourself as an individual?
- What were some of the roadblocks?
- What were some positive effects reaped so far?
- Overall, do you feel that you are achieving both the organizational task goal and your group's goal?
- What small group concepts can be applied to your experience?

Additionally, each student's progress was checked by submission of an individual "Journal Logs and Summary" paper, also due during the first half of the semester, which was comprised of the individual's first six journal entries and a summary of the group's communication. The summary, which was required to be at least 3 pages of the 6-to-8-page paper, had to contain two points: 1) a summary of the individual's role played within the small group (students were provided with a list of small group roles widely cited in the area of small group communication such as "dominator," "supporter," "encourager," and "gatekeeper"), and 2) a report on how the group as a whole was doing. No specific details or names were needed, but this report was designed to increase accountability and to reduce "social loafing" of group members, as students knew that the papers would report on progress as a group and details of group work.

The bases for the "Journal Logs and Summary" paper were individual student logs. Students were to also keep a half-page to a page journal each time they met as a group, including planning meetings. Journal entries could contain information about their small group communication, an application of concepts learned in class to their real-life experiences, or their reflections on volunteer service. Questions were

provided as prompts for journal reflections, which were included in their course packets for reference, and they included the following: What did I see? What surprised me? What stories can I tell to give others an idea of the agency? How did I feel during the experience? What was my initial judgment of what I saw? What community problem makes my service necessary? How might I be part of the problem? What can I learn? What are the roots of the problems? What are the possible solutions? What small group concepts can I apply to my experience?

At the end of the semester and after reviewing their journals, students wrote a reflection paper detailing what they realized about themselves, thought about their volunteer experience, and learned about small group communication in the process. They also presented the reflection paper orally to their class to practice public speaking skills that would be important in their future careers, graduate school, or in other social situations. Also, this allowed the audience both to gain a better understanding of the concepts learned and to be exposed to different perspectives.

The current study sought to assess the perceptions of students regarding the influence of service learning in two areas: education and personal growth. The goal was to assess their perceptions of how service learning influenced their ability to understand and apply small group communication concepts, as well as promoted personal growth. Thus the research questions were:

RQ1: How do students perceive service learning as influencing their classroom learning of small group concepts?

RQ2: How do students perceive service learning as influencing their personal growth?

Project Outcomes

Student reactions to the small group service-learning course, as gaged by their reflection papers, were consistent with those reported in the literature. Reflection seemed to encourage a deeper level of learning about self and one's role in society, as well as the course content material. Students reported that the service provided an opportunity to clarify career goals, generate a commitment to social values, improve self-confidence through a sense of achievement and accomplishment in helping others, and increase communication skills in conflict mediation, listening, leadership, role-playing, and ethical decision-making. They also reflected on the importance of small group communication and showed an ability to apply abstract concepts such as Bormann's Fantasy Theme Analysis to their group interactions. But above all, students noted the satisfaction of being able to make a difference in the lives of others.

Student reflection papers revealed positive effects of service learning. One student noted various effects of the service-learning project, including focusing on a career path to learning about small group roles, as well as gaining the satisfaction of making a difference in others' lives:

Going through this experience has helped me to focus my goals for a career. I do know that I want to work with kids and perhaps through an organization such as the Boys and Girls Club, I can accomplish that and knowing that I am making a difference. Overall, the service-learning project has been very rewarding. From growing in group interactions and realizing the roles I play in a group to getting out into the community and seeing that it only takes an hour a day to help and make a difference, the experience has influenced my life.

Another student noted the various types of learning that the service-learning opportunity afforded, mostly in terms of his civic responsibility, and the relevance of small group communication in his career:

As I became involved in Day Break I realized how important service learning was to me, my group, and of course, the [unnamed] community... This class and the Day Break experience provided me with the opportunity to meet this goal, which I know I would have never accomplished on my own... I have also learned how important group interaction is in the real world. I am currently an economics major and have been through many group projects in the department. However, I never saw the relevance of this until now. I had never been asked to step back and reflect upon my group interactions to analyze what was happening. The reflection process has taught me that group work is beneficial to society in many ways and can help me achieve more efficiently than could be done alone.

Citing a study finding service learning to increase students' sense of social responsibility and the transformational effect of service learning, one student wrote:

Like the students in that experiment, I felt proud to be contributing to the improvement of my community, and that gave me more self-confidence...During the ten weeks of participating in my service-learning project, I did not notice all the changes I was going through. It was only when looking back analytically that I realized that not only did I help the people at the Thurman Brisben Center, but they helped me as well.

Students also were able to hone valuable communication skills during their service learning, as attested by the following student comment:

On a personal level I have learned many different things about myself during this service-learning experience and speech class. I've discovered that it can be advantageous at times to be silent and listen than to talk and dominate a conversation. I've also learned that it is better to have a multiple leadership style approach for equal representation and to not allow me to dominate the group. Finally, I've acquired the knowledge through this class to be a confident public speaker.... [T]hrough my experiences with my group and the children at the Thurman Brisben Center, my listening skills have drastically improved.

On the same topic, another student noted,

At the same time I succeeded in improving my personal communication skills due to my interaction with my group and the community at Day Break.

Students also learned to apply the theories that they had learned from their textbooks and class lectures to their small group service-learning experiences:

Within the group, it was easy to see the symbolic convergence theory at work. Our style of communication related highly to the meaning of fantasy under this theory...The four of us shared numerous stories from the trip, which connects us all together. The more we laugh, and sometimes make fun of each other, the closer the group seems to get over time...This is representative of the fantasy chain revolving around our shared Habitat for Humanity trip.

Another student remarked on the same topic:

Another goal that I was surprised to meet was my ability to apply classroom learning to real life experience. The service-learning project gave me the chance to enforce what I had learned in the classroom in a way I never had before.

Finally, students most often noted that the service-learning project added meaning to their college lives. One student stated:

With regard to service learning, I never would have imagined such a rewarding experience... I realized that this was the perfect opportunity and the perfect time for me to give back to a community that has embraced me for the past 4 years. I will be graduating in May and truly feel that when I walk across that stage to receive my diploma, I will have

a greater sense of accomplishment and fulfillment because of my service-learning experience.

Overall, through student reflections, the value of this experiential learning project was evident: students stated that the service provided an opportunity to clarify career goals, commitment to social values, and improve self-confidence through a sense of achievement and accomplishment in helping others. They also illustrated enhanced learning of in-class material by showing their ability to apply abstract concepts such as Bormann's Fantasy Theme Analysis to their group interactions. The ability to apply abstract concepts and theories to real-life situations is a higher order of learning, according to Bloom's Taxonomy. But above all, students noted the satisfaction in being able to make a difference in the lives of others. In addition to gathering qualitative comments from students about their service-learning experience, students were also asked to fill out an anonymous survey on the topic of service learning to understand the effects of their service-learning experience further, as well as to obtain more generalizable results.

Method

The survey instrument was a seven-item likert scale which collected students' perceptions of various aspects of their service learning anonymously. The survey was distributed during the last two weeks of classes and was voluntary. The seven items included such topics as students' perceptions that the service-learning project helped them to learn the importance of community involvement, was conducive to application of small group concepts, and helped them to realize things about themselves, among others. The survey items were created based on the literature on inductively drawn effects of service learning. A copy of the survey instrument is included in the appendix.

Results

Student responses ($n = 112$) indicate that students had positive perceptions of the service-learning format of the small group communication course, indicated by six of the seven items surpassing 4 of out the maximum 5 points. They felt that the service-learning project helped them to learn the importance of community involvement ($\mu = 4.53$), learn and apply small group communication concepts ($\mu = 4.35$), realize things about themselves ($\mu = 4.36$), and focus their career goals ($\mu = 3.15$). Students stated that the service-learning activity was enjoyable ($\mu = 4.38$) and enhanced their learning experience ($\mu = 4.37$), and that they would recommend the service-learning course to others ($\mu = 4.37$).

Discussion and Limitations of Study

Survey results generally corroborated previous findings of outcomes of service learning, namely providing an opportunity to clarify career goals, commitment to social values, improvement of self-confidence through a sense of achievement and accomplishment in helping others, preparation to take on the role of an engaged citizen, and the satisfaction in being able to make a difference in the life of others. Students also reported enhanced learning and personal growth as effects of the service-learning experience.

Students gave high marks for the fact that the service learning gave them a chance to be involved in the community while learning and applying small group communication concepts through their interactions during volunteering. Reflection journal logs helped students to realize things about themselves as they were learning the concepts and volunteering; it was an exercise in increasing self-awareness for most. The students found the volunteering activities to be enjoyable and felt that it enhanced their learning experience, and they reported that they would recommend the course to others.

The only surprising result is that students were more or less neutral as to whether the volunteer activity helped them to focus their career goals or not, despite some qualitative comments that indicated that service learning had enhanced clarification of career goals. These qualitative responses may have been strongly expressed by certain individual students, but perhaps for others the selection of volunteer sites may not have been a good match for them career-wise. In retrospect, it seems that if the student were fortunate enough to be able to persuade their group members to volunteer at an organization that fit in with their future goals (i.e., Boys and Girls Club for future teachers), then the responses could be quite positive, but if not, the responses would likely be neutral. Working at Habitat for Humanity may link in with a career in Economics within the big picture (awareness of effects of social economic status, for example), but, understandably, students did not see a direct influence on their career goals.

While teaching the course in a service-learning format was one that has had positive effects on the students, preparing to convert it into a service-learning course took much time and effort. Forms need to be created, and organizations with volunteer opportunities need to be identified. If an instructor interested in turning his/her course into a service-learning course were to be fortunate enough to have a campus organization that can do much of the advance research for the volunteer projects, it would markedly reduce the preparation workload for the instructor.

Teaching a course in a service-learning format is not for everyone. Instructors who like to have control

over the projects and their outcomes may have difficulty at first adjusting to the free-flowing and sometimes unpredictable nature of service learning. Organizations may often be late to respond to potential volunteers at times, delaying the onset of the volunteering. Persistent follow-ups to try to make initial contact may be needed for some organizations because, as we came to learn, some organizations have communication problems due to their organization being routinely staffed mainly by volunteers. Additionally, students will have misunderstandings about meeting times and expectations. As always, students in small groups will have to negotiate through different levels of motivation and different proclivities and needs. However, stepping back and letting the students figure out the majority of the problems, with built-in mechanisms for checking on their progress (e.g., deadlines for submission of signed contracts, journals, progress reports), help to provide general guidelines within which students can navigate the progress of their projects themselves. Some students will approach the instructor for assistance with a problematic student or problems with the organization. The instructor should be ready to step in and take the lead when needed, but letting the groups solve their own problems and make their own decisions for the most part can be a valuable learning experience for students. As one student wrote in the survey: "There was the right amount of guidance, but not too much where groups could [not] make their own decisions".

One thing that the author changed recently was to give the students some more information on service learning itself and why it is important. At the time the author first turned the course into a service-learning format, the field of service learning was relatively new. Although deeply impressed by the concept, I was not able to relay some of the beneficial outcomes of the pedagogical approach. Since then, more research has been generated on service learning, which I now share with my students and which helps them to see from the very beginning why this approach was selected for this course.

Another change made was to relay to students some guidelines to consider when selecting organizations to volunteer for. Recently, after listening to numerous presentations by students who worked with small children who expressed dismay that students would be ending their volunteer experience at the close of the semester, the author began thinking that it would be best to have the students become more aware of the sense of loss that the children might feel when volunteers they may have become attached to have to leave. Although beginning and ending relationships reflect an aspect of real life, students should be made sensitive to those difficult situations and encouraged to see things from the volunteer service recipient's perspective. The author also tells the students that there are some organizations

for whom the volunteering activity will consist of stocking food shelves and cleaning up rather than interacting with people. I urge them to become acquainted with the nature of their jobs and, while they should try to push their comfort zones to provide whatever service is necessary to the community, note that they should be aware of what specific work environment they are going into, at the very least.

Finally, it helps the instructor to gain credibility to teach a service-learning course in the eyes of the student if he/she has some prior experience with volunteer projects. For the author it was useful that the author also volunteers for outside organizations, traveling to Honduras to help at an orphanage, teaching ESL at a local church, or serving at kitchens for the terminally ill. Students will give the instructor more credibility if the instructor has been through like situations, and especially if it is out of a genuine desire to help the community rather than to try a new pedagogical approach.

Conclusion

Service learning can be a rewarding for students and faculty alike. Students can learn application of classroom concepts in real-life situations. Especially when teaching a course such as small group communication, application of the format of small groups in a volunteer service-learning environment was a good match. Students reported many positive outcomes from taking the small group communication course as a service-learning format. Best of all is the thought that students are finding meaning in their quest for education by seeing the connection with their present and future civic duties and community involvement. Service learning is a pedagogical approach that can help overcome one of the most cited criticisms of education since the era of Dewey: that there is a disconnect between the educational process and the community wherein it takes place. Service learning helps the students feel the sense of fulfillment from connecting with the community during the education process. One student captured this notion well when he said, "This was probably the best idea to do for a class ever. I honestly can say that this was my favorite class in all my 4 years here because of the service learning. I'm actually going back to the hope house to volunteer more."

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Appendix

Please take a few minutes to answer a couple of questions anonymously regarding the service learning course you completed. Participation is voluntary and appreciated.
Circle the number that most closely reflects your thoughts.

REGARDING THE SERVICE LEARNING PROJECT:

1. The service learning project helped me to learn the importance of community involvement.

Strongly				Strongly
Disagree		Neutral		Agree
1	2	3	4	5

2. The service learning project helped me to learn and apply small group communication concepts.

Strongly				Strongly
Disagree		Neutral		Agree
1	2	3	4	5

3. The service learning project helped me to realize things about myself.

Strongly				Strongly
Disagree		Neutral		Agree
1	2	3	4	5

4. The activity helped me to focus my career goals.

Strongly				Strongly
Disagree		Neutral		Agree
1	2	3	4	5

5. The activity was enjoyable.

Strongly				Strongly
Disagree		Neutral		Agree
1	2	3	4	5

6. The community service enhanced my learning experience.

Strongly				Strongly
Disagree		Neutral		Agree
1	2	3	4	5

7. I would recommend this service learning course to others.

Strongly				Strongly
Disagree		Neutral		Agree
1	2	3	4	5

If there are any comments or any suggestions, please provide them here:

Marketing Meets Microbiology: An Interdisciplinary Approach to Liberal Arts Education

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To address the recent calls for integration between liberal arts education and the business curriculum, we designed the team-taught interdisciplinary course *How to Cell: Marketing Meets Microbiology*. The course blended multiple introductory courses, focused on environmental issues involving microbiology, and addressed how they were being “marketed” to the public. It introduced students from business, science, and other majors to presumably unrelated topics. Our main objective was to help students gain a greater sense of awareness about the roles of business and science in environmental management activities.

Liberal arts universities with business colleges are faced with finding ways to integrate liberal arts education into the professional curricula to help professional program students enhance their broad-based education (Skinner & Lawson, 2006). The need for a more ingrained approach to blending the domains has been made clear via organizations such as the Association to Advance Collegiate Schools of Business (AACSB) and the Association of American Colleges and Universities (AAC&U). According to AACSB, business students need a well-rounded education in order to contribute to organizations and society as a whole. AAC&U (2003) asserts that professional studies, such as business, should be approached from a liberal education standpoint. In a liberal arts school, the business college is faced with the challenge of designing curricula to increase the relevance of arts and sciences to business students (Chew & McInnis-Bowers, 2004; Hawes & Foley, 2006; Hill, 1990). While business students understand the value of a liberal arts education, there is a disconnect between this understanding and the business-world applications of the information.

Many students, particularly business students, cannot link what they learn in the university core curriculum with the courses in their major area of study. They are often overzealous to get these core courses “out of the way” and thus miss their relevance to business education. In a study by Skinner and Lawson (2006), a class of graduating marketing students was asked: “What does it mean to have a liberal arts education?” One of the most common responses was, “To have a more rounded education.” However, when asked later in the semester about changes they would recommend, these same students said things like, “I suggest that business students not be forced to take certain core (liberal arts) courses. For example, I find no reason students need to take physics or nonbusiness related courses.” This perceived disconnection between the core tenets of a liberal arts education and their real-life applications at the undergraduate level can

ultimately deprive students of the unique skills that such an education provides. Thus, integrating liberal arts education within the business curriculum has become an important goal for business school educators (McCabe & Grant, 2007; Warren, 1992; Wilson, 1998).

To address the call for increased blending between a liberal arts education and the business curriculum, we designed an interdisciplinary course that is team-taught by a marketing professor and a microbiology professor. The course, *How to Cell: Marketing Meets Microbiology* (see Appendix A), examined the impact and overall effect marketing has on microbes in health, business, and environmental contexts. The purpose of this course was to integrate the liberal arts concept with seemingly unrelated disciplines across campus through a blending of several introductory courses. The focus of the course was on environmental issues involving microbiology and addressed how they were being “marketed” to the public. It introduced business (e.g., marketing and finance), science (e.g., biology and chemistry), and other majors (e.g., mass communications and environmental studies) to presumably unrelated topics. This class brought together students from several disciplines and helped them understand and see the relevance and value of each discipline.

The course was designed to give students the opportunity to apply learned marketing principles to specific and broad-range environmental issues. It also examined the impact of marketing on the public perception of microbes in health, business, and environmental contexts. We wanted students to improve their critical thinking skills and go beyond their traditional disciplines to become more adept at integrating ideas across academic concepts (Warren, 1992). To increase enrollment and discipline diversity within the class, the course was cross-listed across business, biology, and environmental studies. Additionally, it was listed as an Honors-level course through the Honors Program and included both Honors and non-Honors students.

This article is organized into four sections. The first section describes what we wanted students to gain upon completion of the course, including challenges and opportunities this course addresses. The second section outlines innovations used to successfully implement the course, including the process used to deliver information and student learning assessment measures. The third section reviews assessment results, including anonymous course evaluations and comments from students in their submitted reflection pieces. The final section presents potential challenges and concerns in implementing this type of interdisciplinary approach at other universities and provides recommendations for doing so.

Challenges and Opportunities the Course Addresses

Business and Environmental Concerns

Recently, businesses have used environmental issues and awareness to a strategic advantage. Marketing practitioners had expressed concern that business schools were lagging behind the level of environmental awareness in the corporate world (Ahna & Bancroft, 1992; Barnes & Ferry, 1992). However, marketing strategies can greatly enhance scientific communication to foster collaborations and information that is shared with the public. In response, the AACSB called for business schools to develop students' knowledge and abilities to address such issues.

Many students with majors in scientific disciplines (e.g., biology, geology, and chemistry) and an interest in environmental studies have little familiarity with marketing strategy (Weise & Sherman, 2011). Like numerous consumers, they see marketing as part of the consumption and waste problem rather than as an opportunity for solutions. In addition, business students, particularly marketing majors, can benefit from increased awareness of socially responsible advertising and promotion (Burnett, Keith, & Pettijohn, 2003; Drumwright & Murphy, 2009; Preston, 2010). According to the AAC&U, there is a need for a purposeful integration of business education and the humanities, with a focus on more interdisciplinary approaches in the training of business school students (Chew & McInnis-Bowers, 2004; Hawes & Foley, 2006).

Applying the concepts within a liberal arts education, interdisciplinary learning brings together perspectives and knowledge from different disciplines to approach a problem in a more integrative, comprehensive way. It allows students to approach and solve multifaceted issues through the incorporation and application of knowledge from different disciplines (DeZure, 1998-1999). With this in mind, *How to Cell* was designed to accomplish two goals: (1) to show marketing students how to use environmental integrity as a competitive strategic point of difference in the real

world; and (2) to introduce responsible marketing techniques to non-business majors and show how marketing is used in scientific fields.

What We Wanted Students to Gain Upon Completion

The first objective was to help students gain a greater sense of awareness about the roles of business and science in environmental management activities. Second, we wanted to provide students with an ability to think about pressing issues and possible solutions within their own fields by drawing on contexts from other disciplines. Finally, we wanted students to develop valuable skills desired by employers: problem solving, higher-order critical thinking, research and analysis skills, teamwork, and communication.

Outline of the *How to Cell* Course

The course included three instructional units that reflect key issues raised or avoided within current media. The three units focused on (1) "viral" marketing; (2) food, contamination, and public perception; and (3) marketing, microbiology, and the environment (see Appendix B). Using the recommendations of Hyllegard, Ogle, Rudd, Littrell, and Bickle (2012), each course unit comprised a variety of multisensory instructional tools designed to engage students in learning key scientific concepts and responsible marketing. At least one class period was devoted to examining each topic from the perspective of each discipline. We encouraged group participation and in-class discussions, and both professors posed questions during the lectures in order to weave the disciplines together.

According to Abson (1994), team-based learning enhances cognitive advancement, critical thinking, and the ability to work with others. Learning orientation literature promotes the use of an organization-style environment to stimulate more collaboration, commitment, and community in a class. According to a recent analysis of business job postings, the top four most-cited skills sought after are oral communication (83%), written communication (75.4%), presentation (71.8%), and team/relational/leadership (66%) (Schlee & Harich, 2010). All of these skills are utilized and honed in a learning orientation context.

A learning orientation is defined as the concern for, and dedication to, developing one's competence (Dweck & Leggett, 1988). For a learning orientation, classroom focus shifts from teacher to student (Gonzalez, Ingram, LaForge, & Leigh, 2004; Tanner & Roberts, 1996). Components that allow a learning orientation to develop in a class include a sense of commitment to learning, shared group vision, and open-

mindedness among the students (Laverie, Madhavaram, & McDonald, 2008). To accomplish these aspects, we utilized both individual and group assignments to measure student learning. The co-professors assembled four student groups that included a mixture of students from different majors. Two of these groups solely consisted of Honors students who completed an additional assignment described later in this manuscript. Students stayed in the same groups for the entire semester to facilitate problem solving, work division, and long-term collaboration. The benefit of the liberal arts and science context of the assignments was evaluated indirectly through class discussions and student evaluations.

Student Learning Assignments and Assessment Measures

Each unit plan had activities involving individual participation in online discussion topics and group project presentations in class. The co-professors covered a specific unit (e.g., “Viral Marketing”), students completed an online discussion topic, then student groups presented on a related topic of their choice, making sure to evaluate the three discipline pillars of the course: marketing, microbiology, and the environment.

Experiential learning is a process that allows students to apply concepts and theories to real-life situations to establish connections between what they have learned and what they have observed and experienced (Kolb, 1984). Our goal was to have students demonstrate knowledge of the subject matter, as opposed to regurgitating information they gathered (e.g., Peterson, 2001). To increase the educational relevancy of the topics, we pulled headlines from current events and used them as the basis for individual discussion topics (see appendix C). In the sample discussion topic found in appendix C, students were assigned the roles of public relations ambassadors. In order to write a quality press release, they needed to research the topic (tuberculosis) and include facts regarding why it was important to receive a preventative vaccine.

How to Cell strongly utilized active learning to make students the center of their own learning processes (Warren, 1997). Crittenden, Crittenden, and Hawes (1999) propose the use of teams to improve case-based learning as an effective method for facilitating active learning. Team-based active learning mirrors the workplace (Livingstone & Lynch, 2002) and allows students to develop skills that are relevant and valuable (Schlee & Harich, 2010). The previously-described student groups were utilized with goals of showing students how to improve critical thinking; manage their time; practice interpersonal, listening and

speaking skills; and become better writers (e.g., Jacobsen, 1995; Warren, 1997).

Individual and group unit activities allowed students to explore and analyze varied stakeholder attitudes related to environmental marketing and engaged them in higher-order thinking skills, thus encouraging critical reflection across several disciplines (Bonwell & Eison, 1991). Specifically, the unit activities provided students with the opportunity to demonstrate knowledge of (1) the decisions and activities involved in the development of environmental communications, (2) the potential for positive and negative societal consequences of these communications, and (3) the ability of consumers to respond to these communications.

If an instructor’s standards are high, students will generally rise to meet those standards (Cross, 1987; Peterson, 2001). To clearly define our expectations and measure student comprehension of subject matter, grading rubrics were provided to the students (see appendix D). In addition, specific explanations of what was expected for each assignment were provided. For example, the description of group presentations in the syllabus read as follows: “A 15-minute group presentation will be due at the completion of each unit. Presentations will be evaluated based on content and ability to answer the question or topic. The assignment must include environmental, microbiological, and marketing aspects.”

In addition to the regular group projects, Honors Program students were tasked with an extra assignment to fulfill the Honors Program course requirements. According to Professor Seung Hwuan (Mark) Lee of Ryerson University, creating video documentaries provides students with an opportunity to express their work in a different way (Whalen & Coker, 2016). Thus, in lieu of a final exam, Honors Program students completed a “mini-documentary” (between 5-8 minutes) highlighting an environmental issue dealing with a microbiology/marketing topic of their choice that was not addressed in the course (e.g., the cause of the declining bee population and its lack of media coverage). Non-Honors students watched the documentaries and provided feedback on documentary content and clarity (see appendix D-3).

Student reviews were also a major component of assessment. After each group presentation, students provided two sets of reviews (see appendix E). First, students reviewed the group presentations using a rubric similar to the one provided by the co-professors for grading guidelines. They had to evaluate all presentations, including their own. The co-professors tallied the scores and comments, and a blind review was provided to each group. Second, students had to submit peer evaluations for their individual group. Students not only assessed their peers, but also themselves as group

members. These were used to both reduce the “free rider” effect of groups (Abernethy & Lett, 2005; Brooks & Ammos, 2003) and offer an opportunity for self-reflection. Reviews were requested for each member's attendance of group meetings, degree of respect towards members, willingness to cooperate and be supportive, quality of contributed work, and perceived contribution to overall group performance. Following the guidelines of Razzouk, Seitz, and Rizkallah (2003), the composite scores were then used in computing the team member's grade on group activities. Thus, even if a group presentation earned an “A” grade from class evaluations, the grade for each team member could be different based on the peer evaluation composite scores.

Assessment Results

Course evaluations at the end of the semester were extremely positive. More than 93% of the students thought the class was organized, engaging, and well-presented. However, the most telling information came from student reflective essays.

The first week of class, we asked students to submit an opening reflective essay (see appendix F). In this, we asked what they hoped to gain out of the blended liberal arts course and whether there were specific topics listed (or not listed) on the syllabus they were interested in or wanted to learn more about. Although we were willing to incorporate missing elements into our plans, we found that an overwhelming majority of the students were pleased with the syllabus, wanted greater explanation on topics we were already planning to discuss, or were just simply excited to see how the disciplines merged:

Solely based on all of the information that I have gathered so far on this course, I am very eager to be a participant in this subject. As a marketing major ... I have to admit that I never would have considered the cross relations that could occur between two very different subjects like marketing and microbiology ...the plausibility of this connection seems much more realistic now.

Similarly, we required a closing reflective essay (see appendix F). The week of final presentations, we asked students to reflect on the team-taught, interdisciplinary course and tell what they viewed as the most interesting/best part of the course. One marketing student noted how the course helped him better appreciate biology:

My most positive experience in this class had to be the connections that the biological information presented to us had with marketing concepts. This added another dimension to my understanding of

marketing as well as expanded my knowledge of biology ...and gave me a newfound appreciation of biological concepts.

It became clear how much the non-business majors learned about marketing, specifically the interpersonal and research skills needed to effectively market a product or campaign. One chemistry major wrote about how marketing will help her in her career as a veterinarian:

My most positive experience ... was getting a new perspective on marketing. I have previously always thought of a salesman when I [thought] of marketing ...I thoroughly enjoyed learning that there is much more to marketing than just [sales]. I learned that marketing also deals with public relations, informing the public, and much more. I now see how marketing can be used in a positive light ...such as the marketing of potentially catastrophic diseases that can affect humans, plants, or the environment...I have also learned some marketing techniques which will also be extremely useful in my career as a veterinarian.”

An environmental studies major noted:

... I was able to accomplish my goal of conjoining my passions through this course by gaining knowledge about marketing and how it can be applied to the scientific sphere, as well as a better understanding of scientific concepts and their place in society. I really appreciated the process of research and presentation which we took in our group projects, so that we not only learned more about subjects touched upon in class, but were given the opportunity to share that information with our peers, while simultaneously practicing our public speaking and marketing skills.

Based on the student feedback in both the anonymous reviews as well as the closing reflective essays, we were confident that we had blended marketing, microbiology, and environmental studies, developing a course immersed in the basis of a liberal arts education.

Challenges and Concerns

There are challenges to effectively bridging the divide between liberal arts and business, and a course that blends marketing and microbiology in an environmental studies context that is then delivered through team teaching is not exempt from these challenges. As with any project, there are some challenges and concerns that arise from a student perspective, a professor perspective, and a university perspective. In the opening reflective essays, many

students expressed concerns regarding whether the co-professors would have strife during class. Each professor was motivated to learn and recognized the value of the team-taught course for the students. We met several times the semester before the course began and worked together to develop the syllabus. To manage weekly issues, we ran questions or concerns by each other before and after class and via email, as needed. We were also engaged in each other's lectures, asking questions and offering additional insights to the presentations. In turn, we were able to minimize in-class challenges and disruptions.

From a professor perspective, the amount of time and energy required of the teaching team to develop the course was a challenge. Determining the most effective, interesting ways to blend these disciplines and developing engaging course topics and activities required several months of collaboration. We held off-campus meetings at a local coffee shop to discuss the course, which reduced on-campus distractions like student visits, emails, and other faculty interruptions. Managing learning assessments also raised some challenges. Grading assignments and providing timely student feedback are time consuming activities when teaching a course by oneself. With team teaching, one might think these efforts are diminished, but in actuality, they are doubled. We decided the most effective grading strategy was to have both professors evaluate each assignment and then discuss a final grade. While we both provided grades and feedback on assignments, we rotated the responsibility of being the first to grade the assignment.

From a liberal arts university perspective, the concept of an interdisciplinary course is easily adaptable across multiple disciplines; however, securing interest in the course may prove challenging. We addressed this challenge by cross-listing the course as an upper-level elective across multiple disciplines: marketing, biology, environmental studies, and Honors. Depending on the course level, the complexity of the issue being addressed can change. Similarly, graduate-level courses can grow in complexity. Due to our university's small student body (approximately 3,000 undergraduates), we focused on promoting the course to upper-level students, particularly focusing on the Honors Program. There were sixteen students enrolled in the class. From a course discipline standpoint, 10% of all marketing majors and 4.7% of all biology majors on the campus were enrolled in the class.

Considering that class enrollments are often much larger than sixteen, there are several techniques that can be used to scale up the class for larger enrollment numbers. For example, open-ended classroom discussion questions can replace online discussion questions. These questions can be used to start and finish the class (Bonwell & Eison, 1991). Short

durations of discussion facilitate student participation and engage students in active learning. This helps shift the learning process to be student-controlled. To ensure class participation, the use of small random groups can be used. Small groups create an environment where students can work through their ideas with their peers before sharing their ideas in a large class.

Similarly, student-led question and answer sessions are also beneficial. Students develop open-ended questions from the readings and pose these questions to their peers. Here, students can draw from current trends and issues in the news and make direct comparisons with the assigned readings. This technique can also help build rapport and allows more control for the students to actively adapt material to their own unique learning preferences (Kolb, 1984).

Use of technology in the classroom allows professors to gauge participation levels. For example, incorporating clicker-response testing provides real-time responses. Clickers can be used to take attendance, as a check for understanding basic concepts, or as a mechanism to encourage higher-order thinking and student discussion (Wood, 2004).

Conclusion

There is strong evidence that interdisciplinary, experiential learning benefits liberal arts students (Eyler & Giles, 1999; Markus, Howard, & King, 1993; Wiese & Sherman, 2011). There is still a need to blend business and liberal arts education in a way that effectively brings together the learning goals and objectives from both domains (Chew, McInnis-Bowers, Cleveland & Drewry, 1996). This course provided students with a unique opportunity to combine different passions and see how diverse fields work together to accomplish common goals, such as reducing food waste, sharing information about infectious disease with the public, and effective communication across disciplines. The students learned new concepts regarding each discipline, saw how each of these concepts blended together for a common cause, and developed their own blended concepts for the group presentations. Students also gained a better understanding of the increasing importance of environmental concerns as a critical societal trend and of how marketing can help the cause.

Findings from both the student learning assessments and student reflective essays provide evidence that students increased the depth and breadth of their knowledge relative to environmental marketing, as well as their personal and professional commitment to ethical decision-making. Based on students' performances, positive feedback, and teaching evaluations, this innovative course was considered a success by the students; by the professors; and by the marketing, biology, and environmental studies programs.

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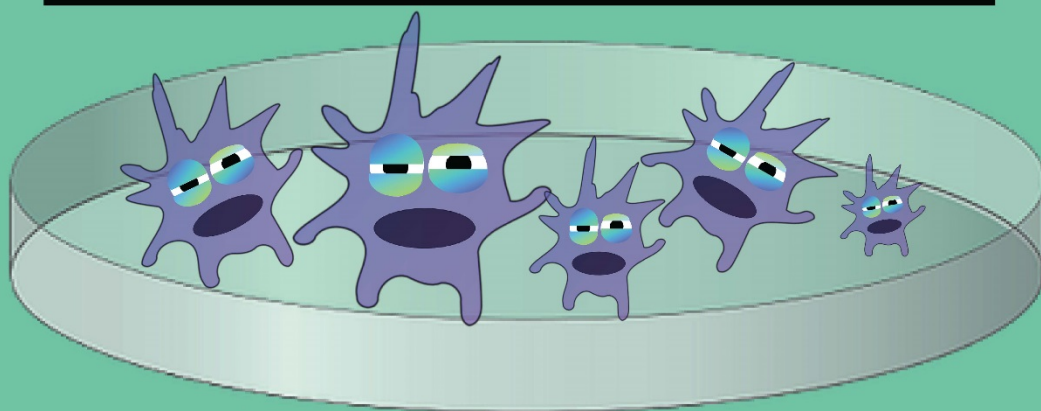
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Prior to obtaining her Ph.D. from Old Dominion University, AMIEE MELLON worked as a practitioner with advertising agencies in Florida and Virginia. For nearly 10 years, she served as an account executive on large multi-million dollar accounts and engaged in freelance marketing for many small businesses. She has been published in journals such as *Journal of Business Research* and *Journal of Business Ethics*. Amiee is currently an Assistant Professor of Marketing in the Stephens College of Business at the University of Montevallo, where she teaches both undergraduate and graduate courses.

CHRISTINE SESTERO received her Ph.D. from Idaho State University and completed postdoctoral training in the Department of Medicine, Division of Clinical Immunology and Rheumatology at the University of Alabama at Birmingham. Christine was part of the NIH IRACDA-funded MERIT program at UAB during her postdoctoral training. Her research has been published in *Mycopathologia* and *The Journal of Immunology*. Christine is an Assistant Professor of Biology at the University of Montevallo, where she teaches microbiology and introductory biology courses and strongly advocates for undergraduate research experiences.

Appendix A
Class Promotional Piece

Let's Get
—CULTURED—



How to Cell

Marketing meets Microbiology

This is a team-taught, interdisciplinary course focused on environmental issues involving marketing and microbiology. We will examine the impact marketing has on microbial topics such as health, food, and the environment.

MK455 BIO405 HNRS309 ES300

MW 2-3:15, CRN 11275

Appendix B Class Outline

UNIT ONE: “Viral” Marketing — Students will become familiar with both the beneficial and detrimental contributions of microbes to human health. Students will also learn details about specific organisms and how marketing (with additional emphasis on public relations) has changed and/or influenced current societal perceptions and attitudes about microbes.

Topic
Course Introduction; <i>Online Opening Reflections Essay</i>
Ebola
Pharmaceutical Taboo Topics
Pharmaceutical Antimicrobials
Germophobia
<i>Online Discussion Topic 1</i>
<i>Group Presentations</i>
<i>Online Peer Evaluations</i>

UNIT TWO: Food, Contamination, and Public Perception — Students will learn about the impacts of food contamination and the role marketing (with additional emphasis on advertising) plays in determining the types and amounts of foods we purchase; special attention will be placed on agricultural crops impacted by microbes and the public perception of what is “safe” to eat.

Topic
Sell By/Best Buy Date Labels
Grapefruit/Citrus
Corn Smut
<i>Online Discussion Topic 2</i>
<i>Group Presentations</i>
<i>Online Peer Evaluations</i>

UNIT THREE: Marketing, Microbiology, and Environment — Students will appreciate the contributions of microbes to the environment and the impact of marketing on public perception of environmental issues, including infectious diseases.

Topic
Black Plague
BP Oil Spill
Marketing: BP Oil Spill
MOVIE: <i>Contagion</i> (relating to first class topic)
<i>Online Discussion Topic 3</i>
<i>Presentations</i>
<i>Online Peer Evaluations</i>
<i>Online Closing Reflection</i>

Appendix C Discussion Topic Example

REMEMBER: Provide at least one outside source to support your statements (not the ones listed in this article); this can either be in your PR piece or in your justification of recommendations.

Tensions are high in Perry County, AL, due to the recent Tuberculosis outbreak. In fact, according to *AL.com*, local health officials are offering incentives of up to \$160 to encourage residents to get tested and treated. However, even with these incentives, health officials are still unable to gain the trust of the community, making it difficult to trace the outbreak point of origin.

Imagine you are appointed as the Public Relations (PR) manager to mitigate the outbreak and promote the \$160 cash 'special.' *First*, read the following scenario. *Second*, read each question and its subcomponents. *Third*, answer each of the following questions; be sure to completely answer **all three parts for each question**.

1A. Write a news release (either a newspaper article or TV news broadcast segment) or commercial (like the pharmaceutical ads) to encourage residents to participate.

- In your answer, state which PR piece you are writing (ARTICLE, BROADCAST, or COMMERCIAL) as the header.
- Write the PR piece exactly how the individual would read it/see it (so for the broadcast, write it how the newscaster would read it; for the commercial, describe what the viewer would be seeing).

1B. Why did you choose this as your method to share the information?

1C. How did you address the issue of government mistrust within the community? Why do you think this will convince the population to be more forthcoming with information?

Things to keep in mind when writing your PR piece:

- Who is the piece *targeted* toward? Teens? Young adults? Elderly? Families?
- Is the piece written to motivate the person through *fear* (of death), *urgency* (offer ends soon), or some other emotion? Is it written to disarm the individual and 'lighten the mood' (e.g., Viagra commercials)?
- *Because time/space in ads is limited*, what facts do you want the audience to hear/remember? What is the proper blending of TB science (dangers/facts/figures) with the monetary incentives?

2A. Respond to at least **two** posts. What is your reaction to the piece? For example, does it cause you to act immediately, seek out more information, or something else?

2B. Who do you think the piece is targeting? What makes you think this?

2C. Give at least two recommendations on how the piece could be strengthened (or if necessary, softened).

Appendix D-1
Group Presentation Grading Rubric

Criteria	4	3	2	1
Introduction	Introduced topic & explained the purpose of presentation in creative, clear way, capturing attention.	Introduced presentation in clear way.	Started with a self-introduction or “Our topic is” before capturing attention.	Did not clearly introduce purpose of presentation.
Content Selection: <i>Microbial, Marketing</i>	All information was relevant & appropriate to requirements of the assignment.	Most information relevant; some topics needed expansion or shortened.	Information was valid but some was not explicitly related to the purpose.	Information not relevant to the audience or directly related to assignment.
Organization	Contains clear central message & clearly-identifiable sections featuring organizational pattern (chronological, problem-solution, analysis, etc.)	Central message is identifiable; sections vary in organizational pattern, which influences audience engagement level or comprehension of central message.	Central message is not clearly and/or easily identifiable by audience; sections may be in need of further organization & clarity.	Does not contain central message or identifiable organizational pattern.
Transitions	Effective, smooth transitions that indicated transitions in presentation topic or focus.	Included transitions to connect key points but speakers often used fillers such as um, ah, or like.	Included some transitions to connect key points but over reliance on fillers was distracting.	Presentation was choppy & disjointed with a lack of structure.
Conclusion	Ends with accurate conclusion tying content back to opening with a dynamic close. Transitioned into close.	Ends with a summary of main points showing some evaluation but is choppy.	Ends with a recap of key points without adding a closing twist.	Ends with only a recap of key points or with no transition to closure.
Length (15 minutes)	Time used efficiently. Within +/- 20 seconds of allotted time.	Within +/- 40 seconds of allotted time.	Within +/- 1 minute of allotted time.	Substantially longer or shorter than indicated by assignment.
Visual Aids (where appropriate)	Professional & easy to read. Materials enable speakers to focus on presentation & provide audience with important resources for later consideration.	Contain appropriate material but too much text. Materials provide useful information for further consideration but may not directly relate to central topic.	Occasional typos, unclear organization, and/or questionable applicability to presentation. Significant amount of text.	Many typos or too much text on slides. Material either identical to speaker’s speech or completely disconnected from it, OR does not include handouts.
Gestures/ Posture	Confident demeanor, gestures of all members add to style, & hands are used to describe or emphasize.	Confident demeanor; some members may need to add or subtract gestures to emphasize points.	Most members have slumping posture, hands stuck at sides or on podium OR Shifting weight or pacing.	All members show slumping posture, hands stuck at sides or on podium & Shifting weight or pacing.
Audience Engagement	Involved audience in presentation; held their attention throughout by getting them actively involved in the speech & using original, clever, creative approach.	Presented facts with some interesting “twists”; held attention most of the time by interacting with them. Good variety of materials/media.	Multiple members went off topic & lost audience. Failed to utilize method to pull the audience into the speech.	Members avoid or discourage active audience participation.

Appearance of speakers	All members appear appropriate for occasion & audience.	For the most part, all members appear appropriate for the occasion & audience.	Most members' appearance is somewhat inappropriate (hair keeps falling in eyes, jewelry distracting).	All members wear inappropriate clothes for event or audience.
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Appendix D-2
Online Discussion Topic Grading Rubric

Criteria	10	7	3	0
Quality of Original Post	Appropriate comments related to discussion content: thoughtful, reflective, and prompts further discussion of topic.	Appropriate comments related to discussion content.	Posts, but with minimum effort and topic relevancy.	Does not post.
Quality of Response Post to Classmate	Appropriate comments related to discussion content and respectful of other's postings.	Posts, but with minimum effort and topic relevancy.	Posts but fails to fully address the assigned response task.	Does not post
Quality of Writing and Proofreading	Uses language that skillfully communicates meaning to readers with clarity and fluency. Good use of transitions; no problems with spelling, punctuation, or grammar. Infrequent or minor mechanical problems.	Understandable language that generally conveys meaning to readers. Occasional errors and minor problems with mechanics of language. Occasional awkward sentences and poor transitions reduce readability.	Language generally conveys meaning to readers with clarity, with few writing errors. Frequent problems with mechanics of language. Awkward sentence structure. Poor or absent transitions. Frequently difficult to understand.	Language impedes meaning because of errors in usage. Problems with the mechanics of language serious enough to interfere with effective communication. Frequent errors in punctuation, spelling, sentence structure, etc.

Appendix D-3
Honors Documentary Grading Rubric

Criteria	4	3	2	1
The Pitch	The pitch presents a creative, clear theme, point and message. The main idea is clearly defined.	The pitch has a main idea, but some information doesn't fit.	The pitch has a weak or unclear main idea.	The pitch does not present a main idea.
Narrative	The storyline has a clear organizing structure and flows logically. Premise or issue is up front and introduced powerfully.	The storyline has an organizing structure but needs some improvement. Premise or issue being investigated is clear.	Storyline is disorganized.	No attempt at an organizing structure is in place.
Research Information	Information used is accurate, authenticated and well researched.	Information is adequately researched but needs improvement.	Information is not well researched and authenticated.	No apparent research of information.
Audience	Strongly considers and identifies intended audience: culture, age, psychographics etc.	Shows some consideration of intended audience	Doesn't adequately consider and identify audience.	No consideration of audience.
Effectiveness of Film	Film was effective, informative and appealing.	Film was either effective or appealing but not both.	Film was not interesting. Did not convey information or compelling message.	Not informative, interesting or engaging.
Indication of Thinking and Learning	Film showed creativity, high levels of teamwork and critical-thinking. Film terminology was well understood.	Film showed a basic command of the subject, but lacked some creativity and thoughtfulness.	Little indication of teamwork imagination, creativity, research, or thoughtfulness in the film.	No creativity or imagination used.
Timing	Film did not go longer than 15 minutes, and was 12-15 minutes of engaging content.	Film was 10-11 minutes of engaging content.	Film was 8-9 minutes of engaging content.	Film either went over time limit, did not exceed 8 minutes, or did not include engaging content.

Appendix E-1
Group Presentation Evaluation Forms (Used By Students)

Criteria	4	3	2	1
Introduction	Introduced topic & explained the purpose of presentation in creative, clear way, capturing attention.	Introduced presentation in clear way.	Started with a self-introduction or "Our topic is" before capturing attention.	Did not clearly introduce purpose of presentation.
Content Selection: <i>Microbial, Marketing</i>	All information was relevant & appropriate to requirements of the assignment.	Most information relevant; some topics needed expansion or shortened.	Information was valid but some was not explicitly related to the purpose.	Information not relevant to the audience or directly related to assignment.
Organization	Contains clear central message & clearly-identifiable sections featuring organizational pattern (chronological, problem-solution, analysis, etc.)	Central message is identifiable; sections vary in organizational pattern, which influences audience engagement level or comprehension of central message.	Central message is not clearly and/or easily identifiable by audience; sections may be in need of further organization & clarity.	Does not contain central message or identifiable organizational pattern.
Transitions	Effective, smooth transitions that indicated transitions in presentation topic or focus.	Included transitions to connect key points but speakers often used fillers such as um, ah, or like.	Included some transitions to connect key points but over reliance on fillers was distracting.	Presentation was choppy & disjointed with a lack of structure.
Conclusion	Ends with accurate conclusion tying content back to opening with a dynamic close. Transitioned into close.	Ends with a summary of main points showing some evaluation but is choppy.	Ends with a recap of key points without adding a closing twist.	Ends with only a recap of key points or with no transition to closure.
Length (15 minutes)	Time used efficiently. Within +/- 20 seconds of allotted time.	Within +/- 40 seconds of allotted time.	Within +/- 1 minute of allotted time.	Substantially longer or shorter than indicated by assignment.
Visual Aids (where appropriate)	Professional & easy to read. Materials enable speakers to focus on presentation & provide audience with important resources for later consideration.	Contain appropriate material but too much text. Materials provide useful information for further consideration but may not directly relate to central topic.	Occasional typos, unclear organization, and/or questionable applicability to presentation. Significant amount of text.	Many typos or too much text on slides. Material either identical to speaker's speech or completely disconnected from it, OR does not include handouts.
Gestures/Posture	Confident demeanor, gestures of all members add to style, & hands are used to describe or emphasize.	Confident demeanor; some members may need to add or subtract gestures to emphasize points.	Most members have slumping posture, hands stuck at sides or on podium OR Shifting weight or pacing.	All members show slumping posture, hands stuck at sides or on podium & Shifting weight or pacing.
Audience Engagement	Involved audience in presentation; held their	Presented facts with some interesting	Multiple members went off topic &	Members avoid or discourage active

	attention throughout by getting them actively involved in the speech & using original, clever, creative approach.	“twists”; held attention most of the time by interacting with them. Good variety of materials/media.	lost audience. Failed to utilize method to pull the audience into the speech.	audience participation.
Appearance of speakers	All members appear appropriate for occasion & audience.	For the most part, all members appear appropriate for the occasion & audience.	Most members’ appearance is somewhat inappropriate (hair keeps falling in eyes, jewelry distracting).	All members wear inappropriate clothes for event or audience.

Appendix E-2
Group Presentation Peer Evaluation Forms *(used by students)*

Write the name of each of your group members in a separate column. For each person **(including yourself)**, indicate the extent to which you agree with the statement on the left, using a scale of 1-4:
1=strongly disagree; 2=disagree; 3=agree; 4=strongly agree.

Evaluation Criteria	Group member:	Group member:	Group member:	Group member:
Attends group meetings regularly.				
Arrives to group meetings on time.				
Contributes meaningfully to group discussions.				
Completes group assignments on time.				
Prepares work in a quality manner.				
Demonstrates a cooperative and supportive attitude.				
Contributes significantly to the success of the project.				
Respects each group member's opinions.				
"If given the opportunity, I would work with this person again."				
TOTAL				

Things to consider:

1. How effectively did your group work?
2. Were the behaviors of any team members particularly valuable or detrimental to the team? Explain.
3. What did you learn (whether positive or negative) about working in a group from this project that you will carry into your next group experience?

Adapted from a peer evaluation form developed at Johns Hopkins University (October, 2006)

Appendix F Opening And Closing Reflections

Opening and Closing Reflection Essays: During the first and last weeks of the semester, you will write reflection essays that will ask you to focus on what you hope to gain or what you have gained from the course. The opening reflection essay will give you a platform for addressing what you expect to learn and what you would like to learn from this course. The closing reflection essay will ask you to assess your experience with the course. Each essay will be submitted on Canvas and guidelines for writing the essays will be provided.

Opening Reflective Essay (30 pts.)

Format and Submission Guidelines: 2 Page limit; typed and double-spaced; submit online.

Content of the Essay: This paper will give you an opportunity to reflect on what you hope to learn in this class and what you'd like to accomplish. Address the following:

- Reflect upon what you hope to gain from this class and how you think it might benefit you. Consider your academic interests and how they might benefit from discussions we will have this semester.
- Upon reviewing the topics we will cover this semester, is there anything that you are especially eager to talk about? Is there anything that you are maybe less eager to talk about? (Don't worry, there are no right or wrong answers here!)
- Reflect upon the impact taking a course taught by two instructors from two different disciplines. Do you think this might be beneficial? If so, how? Can you think of any potential drawbacks?

Evaluation Criteria: Grammar, spelling, punctuation; professionalism; completeness: address all the issues outlined in the "Content of the Essay;" quality and creativity

Closing Reflective Essay (30 pts.)

Format and Submission Guidelines: 2 Page limit; typed and double-spaced; submit online.

Content of the Essay: This paper will give you an opportunity to reflect on what you have accomplished and learned in this class. Address the following:

- Your most positive experience in this class.
- Your not-so-positive experience in this class, why it happened; what you could have done in order to change/avoid it.
- Your reflections on what you have gained from this class and how you think it might benefit you. If you feel you have not gained anything, feel free to say so and provide some perspective on how you would change this class so that you may benefit from it.
- Reflect upon your experience taking a course taught by two instructors from two different disciplines. What types of advantages and/or disadvantages did this present?

Evaluation Criteria: Grammar, spelling, punctuation; professionalism; completeness: address all the issues outlined in the "Content of the Essay;" quality and creativity

